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Vol. 4. No. 1.

January 1907.

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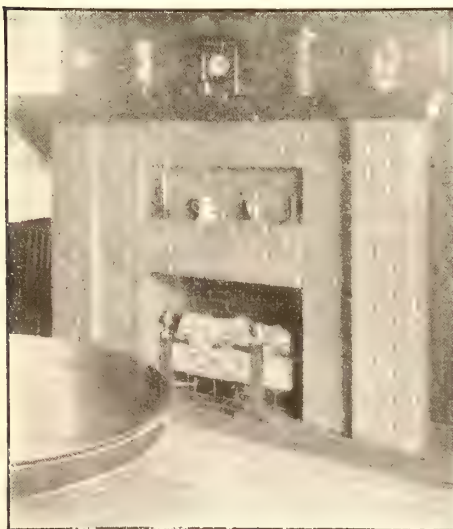
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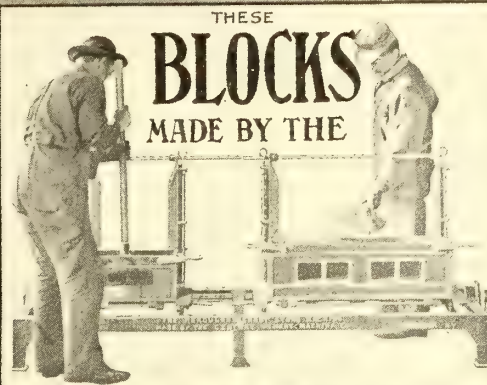
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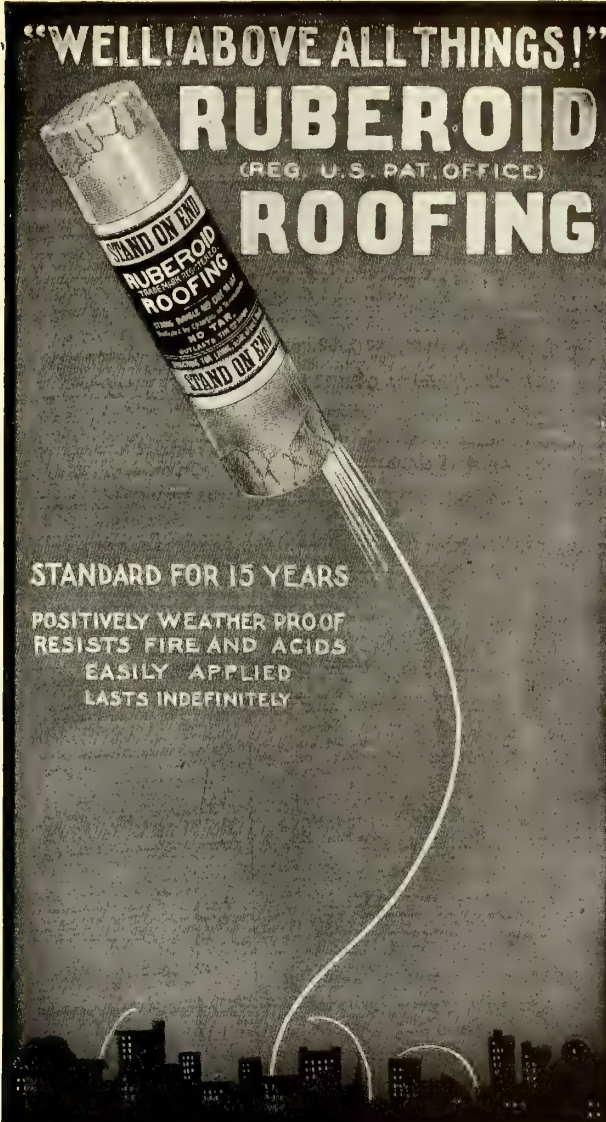
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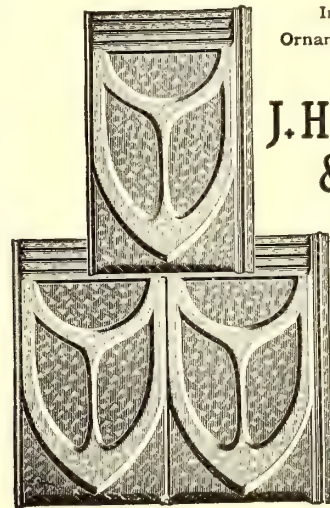
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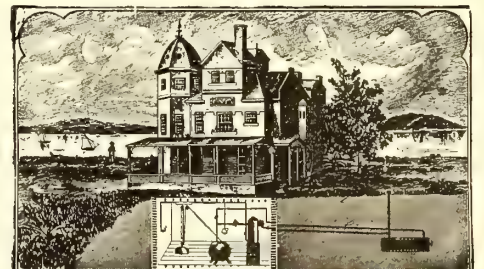
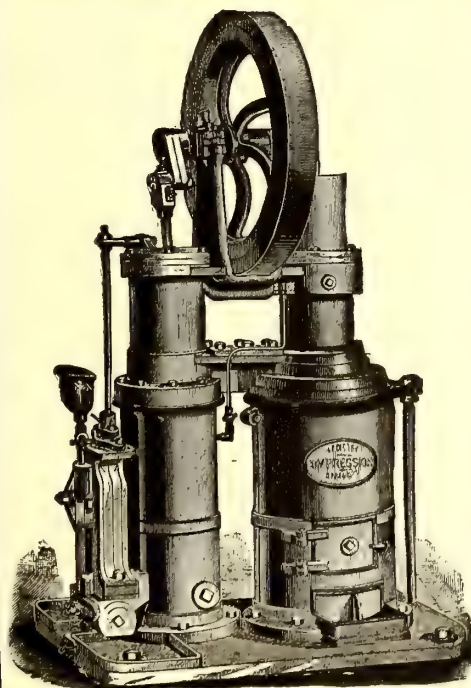
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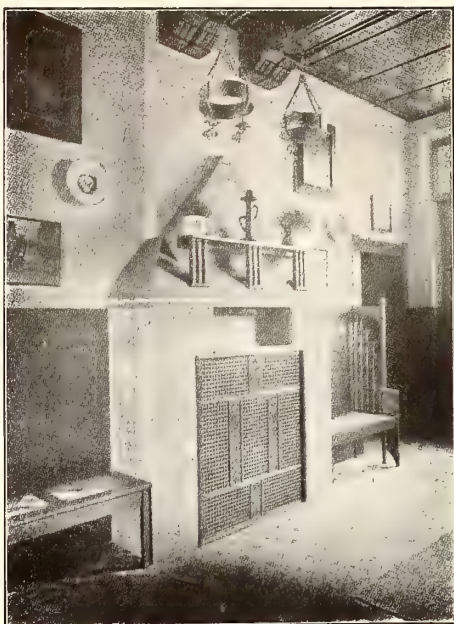
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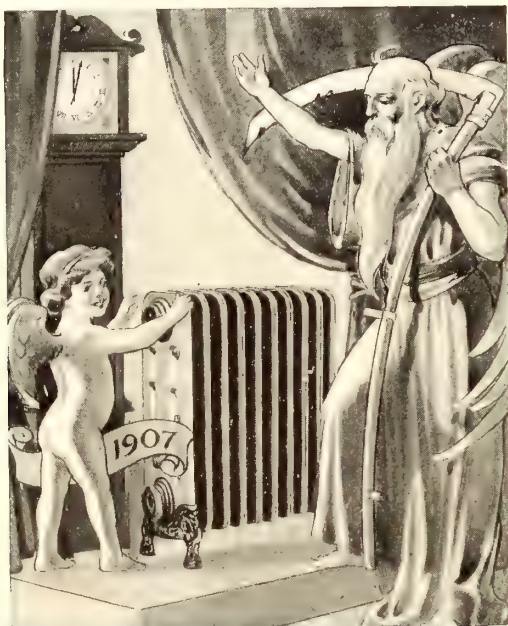
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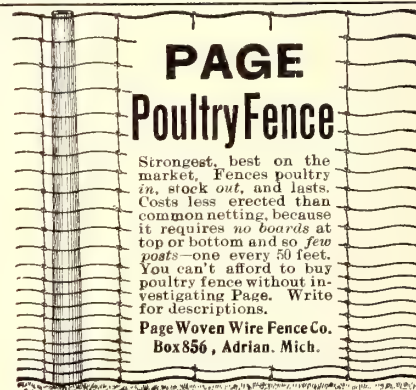
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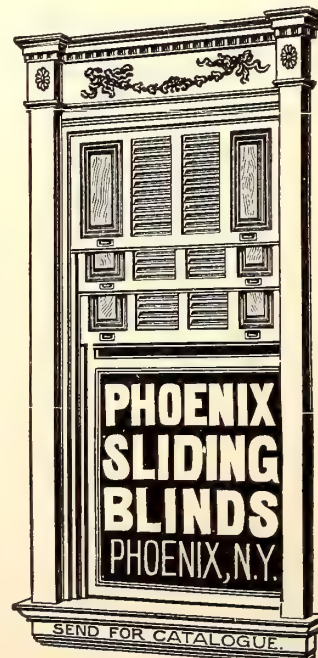
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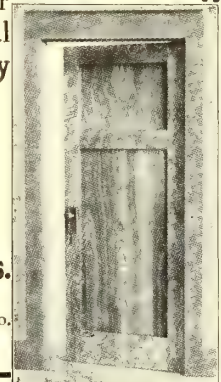
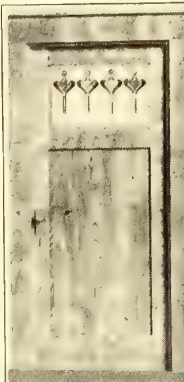
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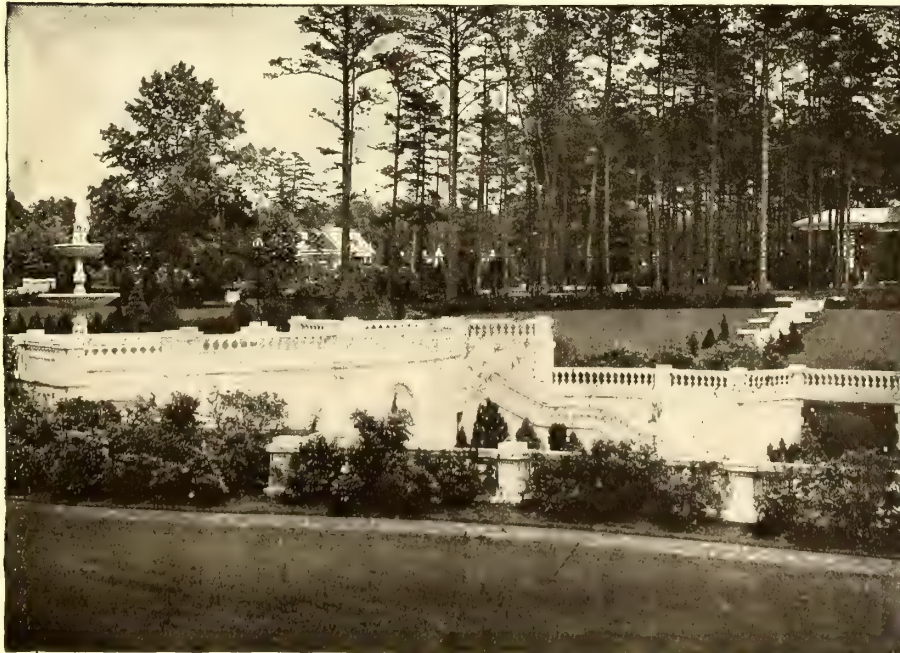
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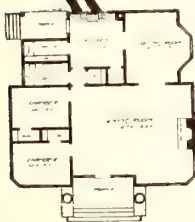
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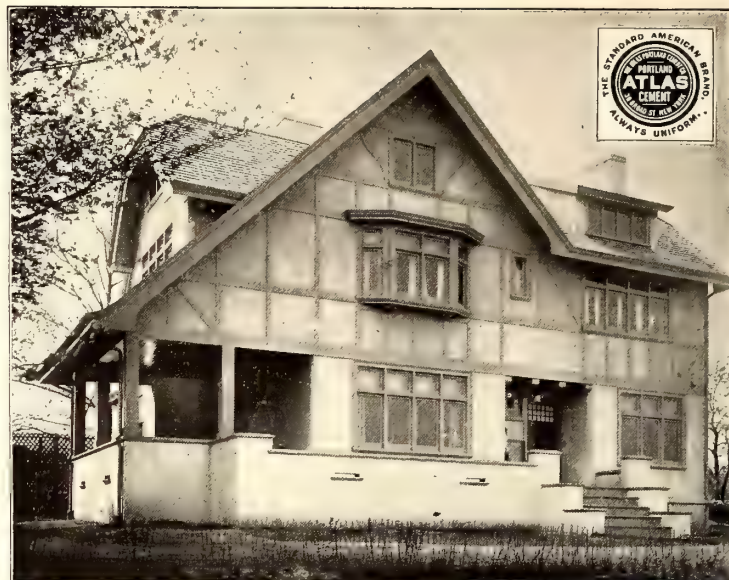
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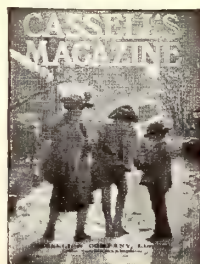
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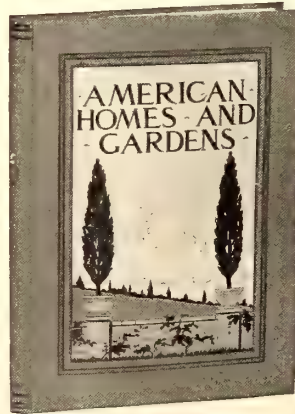


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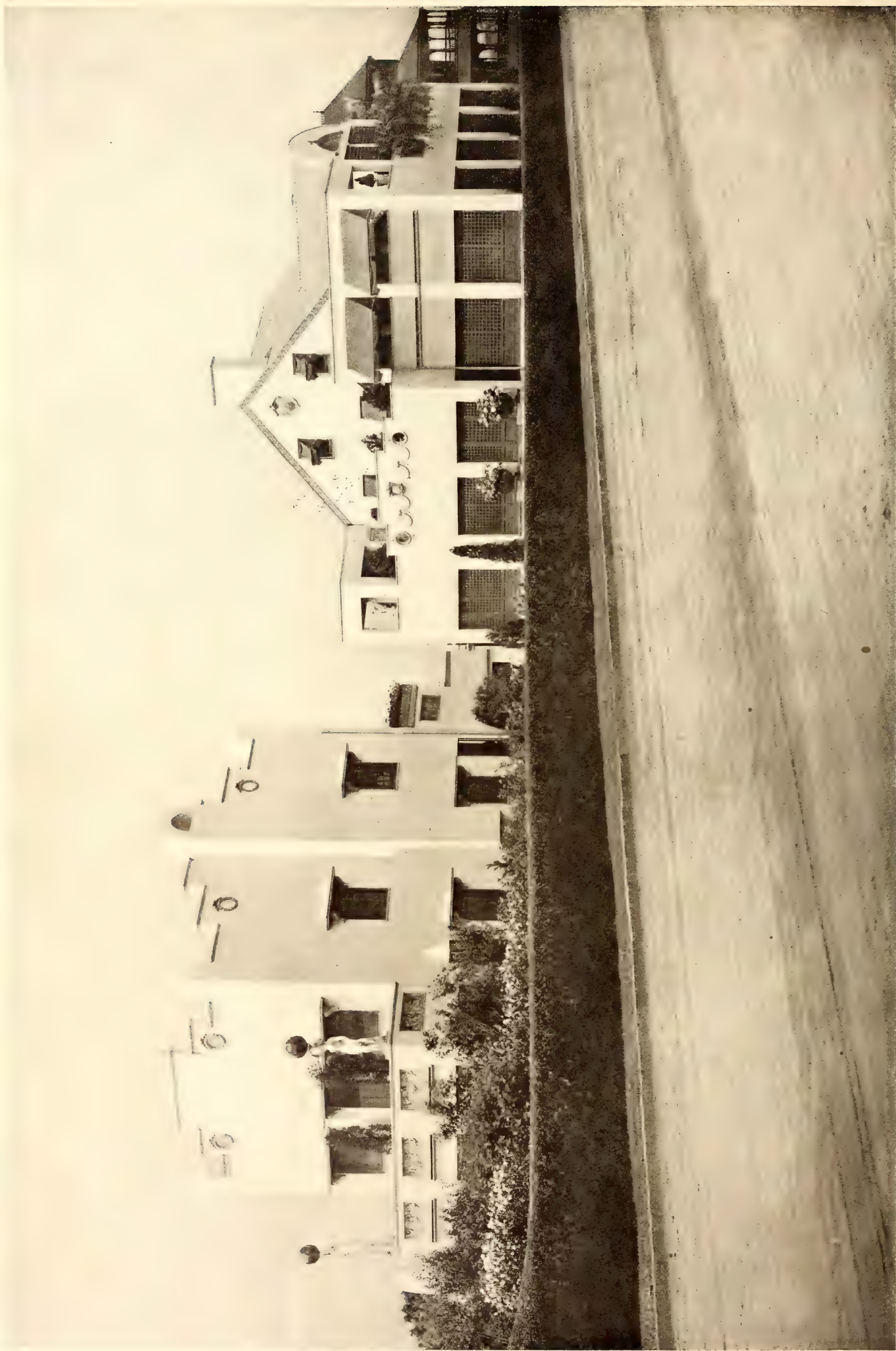
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Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

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"The Blow-by-the-Sea." An Unique Italian Villa at Monmouth Beach, New Jersey, Designed by Mrs. John W. McDonald

AMERICAN HOMES AND GARDENS



Volume IV

January, 1907

Number 1



"The Blow-by-the-Sea"—The Pergola Is a Striking Feature of the Place as It Represents a Roman Tomb; Mosaic Columns Are Placed on Either Side of the Entrance

Monthly Comment



SPORADIC efforts at reform are not always successful and often fail to accomplish real good, but they are not necessarily useless. Take, for example, the question of public manners. This is really a burning question, worthy of the most serious consideration and something in earnest need of vigorous propaganda; yet, as a topic, it receives only scant attention from the public press, and has never yet been elevated into the dignity of a public question. Yet there are few subjects that stand in greater need of immediate attention from all classes of people. The display of public manners that is on view in these United States of ours is something so singularly bad that often enough it seems as though there was nothing else. Public manners, of course, refers to the behavior of any person in public. It affects conduct in street cars, in crowds, in public places of every sort; it refers equally to conduct in a high class restaurant and to that in a police court; it is concerned with men and women, with old and young; it is something that every one should be interested in and which affects many people, often in a most unexpected and unwelcome way. It is quite proper to ask what is to be done in a matter of such universal importance, and what steps are being taken to remedy a crying public evil.

A FIRST step in the betterment of this evil is the creation of a definite public opinion as to the necessity and the value of improvement. The good people of this land are entirely too prone to ignore matters that do not seem to immediately affect their pocketbook. The loss of money or of income from boorish behavior in public does not appear, as yet, to rank among the topics collated by the statisticians. It is an intangible, indefinite thing, the avoidance of which is doubtless considered desirable, but which, after all, is often supposed to be a matter of comparatively small moment. So our women are jostled and injured in crowds; elderly people and old are thrust to one side in order that the wonderful new "youth" of the country can find a place for itself; spoken language is soiled in countless ways; and a general carnival of bad manners holds high riot throughout the land. Courteous folk, like well-trained foreigners, settle among us and soon find their inborn courtesy regarded as quaint and a detriment to advancement; a few years—sometimes a few months—rids them of their superfluous manners and they become as rude as the rest of us. A good resolution to make at the beginning of a new year is to determine to be a little better behaved than the year before on all public occasions. If everybody, by great good fortune, should happen to make such a resolution, this land would be marvelously more agreeable to live in than it is. And its present attractions are not few.

NO DISCUSSION of home problems is now regarded as complete which does not include a chapter on the decay of that world-wide institution. The prophets who foretell its speedy demise, or the historians who rise to chronicle its extinction, appear with the regularity of comets, bursting across the heavens at stated intervals and leaving a brilliant tale of desolation behind them. Meanwhile, many persons who do not know that there is no longer such a thing as a home, or that under modern conditions there can not be such a thing, go on trying to create one on their own account, and, remarkable to relate, sometimes succeeding in doing so! And why not? The healthily minded soul is not alert for unfortunate conditions or undesirable situations, and the right sort of people,

even under difficult conditions, will find no trouble in making a home of their own, and a good one. There is no surer, more certain way of putting an end to the home as an instrument of civilization than to theorize on its extinction. Such philosophy is apt to be discouraging and is quite unnecessary. Is it possible these wiseacres have no homes of their own and want to make every one else equally miserable?

IN A general way there are two classes of elements which help to make a home, exactly as their absence tends to mar it. One group constitutes the visible outward signs, such as the house or apartment, the land or garden, and the funds by which life is supported. The other group includes the personal elements, the spiritual and intellectual side of the home, the intangible things which often count for so much and which, quite as often, can not be measured and indicated with any definiteness. It is difficult and perhaps unnecessary to try to distinguish which is the more important of these factors in home making. It is difficult to live, to be comfortable, or to have enjoyment under physically unpleasant conditions; but the spiritual life is not always extinct under such circumstances. It is not, in short, necessary to live in a palace in order to be happy.

THE fact is, so many matters enter into the making of a home that no one can be singled out as the one chief essential. Some may be more important than others; some may affect some people more than other conditions may; what seems essential to one may be quite secondary to another. The great trouble with the home problem—if such a problem really exists—is that many people do not know what a home is, do not understand what they might do or ought to do to better it; do not know what may help to make it more homelike; or are ignorant of personal errors and failings, and look invariably for their fellow's mote, ignoring the historic beam in their own eye. There are few limitations to the varieties of human nature. What is the best for one person is not always good for another; and what is the ideal for one may be quite the reverse for another. The home is, in reality, an ideal state; or, to put it another way, a state of ideals. If the ideals which underlie it are not good or do not exist—as often happens—the home naturally becomes an impossibility. The cure will not be found in bemoaning the lack of homes, but in inviting the attention of the dissatisfied to more wholesome aspects of the home life.

FURNITURE styles change with quite alarming rapidity. For the furniture man it is good business that they should. It promotes trade, it increases buyers, it prevents the old furniture from wearing out too soon, for no one will keep it long enough to find that it does not always survive. Unfortunately every one can not have a new set of furniture with each change of style. The old furniture is often good enough to last some time, and often it must be retained from the lack of means to purchase new articles. The housewife should not be discouraged by such matters. So long as there is furniture factories just so long there will be changes in furniture styles. The solution of the difficulty is not in the constant buying of new furniture, but in the buying of good furniture when any is needed. As a matter of fact style in furniture is not always nearly as essential as excellence and goodness. These are truly permanent qualities, while mere brightness and prettiness, no matter how fresh and pleasing when new, seldom have lasting qualities.

Notable American Homes

"THE BLOW-BY-THE-SEA"

How a Woman Built An Italian Villa Without the Aid of an Architect

By Tomaso Cambiaso



MR. JOHN W. McDONALD'S villa, at Monmouth Beach, N. J., is a very unusual type of country house. It is built of stucco with a copper green roof; the whole of the exterior being of white and green, with the exception of the Roman reliefs at the cornices, shields, and panels, which are of ivory white and raw sienna, even the awnings being of copper green. If the style of architecture should be named it would unquestionably be called Roman. It is a most unique bit of architecture designed and carried out entirely by Mrs. McDonald herself. No architect could have permitted these quaint archaisms to remain unmodified, for much of the charm of Mrs. McDonald's house, as it stands, would have departed.

It might have gained a higher architectural quality than that of a quaint and exotic charm, but that charm evidently depends upon the spacious area of blank wall, the barred windows, the shut-in prison effect of the verandas and loggias which look as if they had been cut after the walls had been built.

One can hardly recommend this example of house as a good one to follow, but the owner has, nevertheless, been most successful in obtaining the particular effect she sought, which is most unique.

The enclosed piazza is the chief pride of its owner, and the crowning distinction of the house, for it is really a sumptuous living-room or conservatory. It is the real center of the McDonald house and gives that importance and interest which few houses have. It is enclosed with lattice, the whole being carefully screened. The walls are of stone, set with panels reproducing the "Nymphs," by Jean Goujon, from the Fountain of Innocence, Paris, and statuary is placed amid trailing vines and palms. Most luxuriant Roman swings and benches are piled with exquisite foreign looking cushions. A reproduction of a Pompeian table from the house of Cornelius Rufus occupies one end of the piazza; it is covered with an antique Persian rug, upon which stands a Moorish lamp in green, as are all other outside lights.

The floors are covered with Oriental rugs in old pinks and raspberry reds, giving the desired background for the ivory



"The Sheds" Is a Small Building Built on the Grounds and Used for Bachelor Quarters



The Fountain in the Breakfast-room



The Gates to the Pergola



The Upper Loggias Have a Singularly Restful Charm

The charm of the house is quaintly exotic and depends upon the spacious area of blank wall, the barred windows and verandas, which look as if they had been cut after the walls had been built.



The Entrance-front and the Ga

Roof, with Exterior Coloring of White and Green
Cornices, Shields, and Panels



The Court from the Entrance to the House



The Façade of the Front Is Characteristic of the Italian



Which Are a Trophy from Italy



The Steps to "The Sheds"

The one color scheme has been used throughout the house, that of ivory-white and pinks, from the rich raspberry to the palest shade of pink; all the outside windows and doors have French shirred shades of pink silk.



The Fountain in the Breakfast-room

The House Is Built of Stucco with a Copper-green Roof, with Exterior Coloring of White and Green. There Are Roman Reliefs at the Cornices, Shields, and Panels



The Gates to the Pergola



The Court from the Entrance to the House



The Façade of the Front Is Characteristic of the Italian



The Upper Loggias Have a Singularly Restful Charm



The Entrance-front and the Gates Which Are a Trophy from Italy



The Steps to "The Sheds"

The charm of the house is quaintly exotic and depends upon the spacious area of blank wall, the barred windows and verandas, which look as if they had been cut after the walls had been built.

The one color scheme has been used throughout the house, that of ivory-white and pinks, from the rich raspberry to the palest shade of pink; all the outside windows and doors have French shirred shades of pink silk.



The Drawing-room Is in Coral-pink and Ivory-white

white of the Egyptian and Roman benches and settees.

This piazza very wisely secures the one thing whose absence is most grievous to many American homes—that is privacy. Our homes are built mostly, not to live in, but to be seen, and we are too self-conscious to enjoy the publicity we court. It is in this cloistered seclusion tea is served every afternoon, and it is at this time the real charm of the house is felt.

At the extreme southeast end of the piazza, opposite the main dining-room, is the breakfast-room, where a delightful fountain plays amid ferns and palms. The hall and music-room also open out on this enclosed piazza.

The dining-room is a wholly classic, Roman room. The walls are paneled in ivory white and gold, severely finished with a Greek pattern in raw sienna. At



An Enclosed Piazza in Which Effective Use Has Been Made of Replicas of Ancient Statuary

one end is a large portrait in oil of Master Donald, the only son of the house.

The dining-table, the console, and serving-table are of stone and marble in Roman design, as are the chairs and benches of ivory white with pink cushions. The ensemble is the contrast between the ivory white of the walls and the exquisite pink of the draperies and the pink rug with its wide black border.

The one color scheme has been used throughout the house, that of ivory white and pinks, from the rich raspberry to the palest shade of pink; all the outside windows and doors have French shirred shades of pink silk, giving a most fascinating effect when the house is lighted.

The upper loggias have a singularly restful charm. They form open rooms in summer and can be enclosed in the cool weather.



Another Glimpse of the Enclosed Piazza



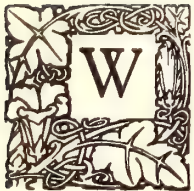
The Dining-room's Color Scheme Is Coral-pink and Ivory-white. The Table and Buffet Are Marble



Three Types of Houses

Built by the Nassau Electric Lighting Company for Their Employees at Roslyn, Long Island

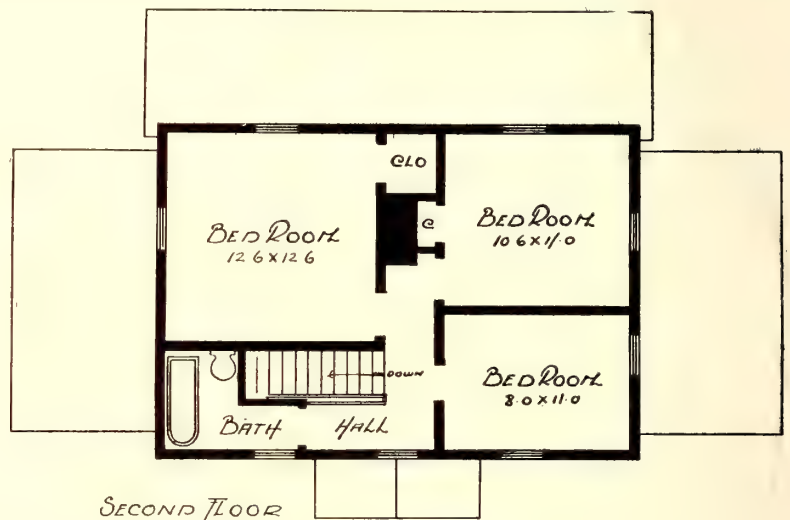
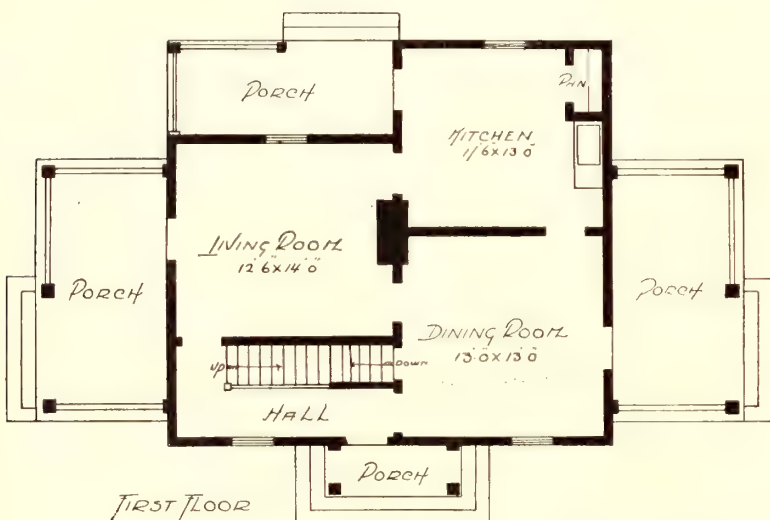
By Francis Durando Nichols



WHEN the Nassau Electric Lighting Company desired to provide proper homes for their employees, and place them in clean and proper surroundings, they purchased a tract of land within close proximity to their plant, though not too close to make the plant ever evident to the dwellers who might live in their contemplated houses. After the tract of land was purchased and graded,

very inexpensive, costing from \$2,100 to \$3,000 complete. This is a very low cost, and is an important feature, especially for dwellings of this character. The dignity and simplicity of these houses are also matters to be considered. They are not unlike many of the houses seen in some of the quaint old New England towns.

These features are of particular moment when one considers the high-priced conditions in the building trades at the



1—The Plans of the Small Single House Are Excellent

and the roads and walks built and placed in good condition, then it was decided to build the houses.

The architect selected by the company to work out a scheme for development was Mr. Lionel Moses, II, of New York. Mr. Moses, after studying the site and its possibilities, decided to accept the "square rigged" form as being the best adapted to meet the necessary needs and to treat them with the simple detail of the Colonial features.

These houses are



2—The Exterior of the Small Single House Is Good

present time. That building in this country is now higher than it has ever been before is true and, to overcome it, so that a man may still be able to build a home within his means, it has devolved upon the architect to solve the problem for the client who wishes a small house of low cost and who desires to build it for a small amount of money. In this particular case these houses were all built by the company, but the same question arose from the economical stand-

point. These houses were built cheaply, and, even so, they have such merit in them that they make model houses for any one whose requirements are not too great. Mr. Moses has designed something beyond the commonplace house and, in order to overcome the cost of building, it was necessary to adopt every possible economical means in order to meet all the essential requirements for a well-regulated house of low cost.

In the designing of these houses there has been but one thought, and that has been to eliminate all unnecessary ornamentation, except that which means something, such as the main cornice, which is bracketed and gives a dignity to the building. All the houses have similar detail, of the Colonial style. They have brick foundations and underpinnings laid in white mortar. The superstructures are covered with matched sheathing on the outside of the studing. This sheathing is then covered with good building paper and clapboarded. All the houses are painted white, with blinds of ivy green. The roofs are covered with shingles and left to weather finish. The arrangement of each house is



3—White Painted Clapboards and Green Painted Blinds Is the Color Scheme of the Small Single House

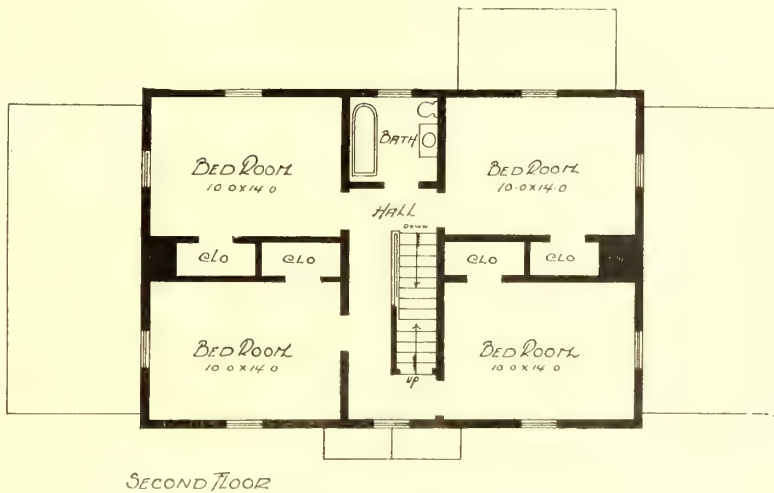
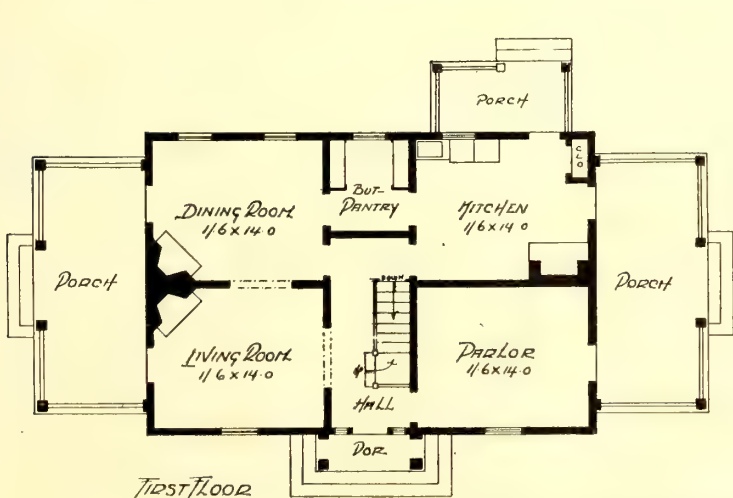


4—The Larger Single House Is Designed With the Same Colonial Features as the Small Single House

balustrade. The rail is of dark oak. From the hall access is obtained to the living-room and the dining-room, and each of the latter connects with the kitchen beyond.

One chimney, placed in the center of the house, suffices for each room, and the rooms on the first floor, being located as they are with connection to the kitchen, permit of sufficient heat being taken from the kitchen range to heat the living-room and dining-room until extremely cold weather.

The living-room opens on to the porch at one side, while a similar porch, placed at the opposite side of the house, opens from the dining-room. These



5—The Plans of the Large Single House Show a Central Hall with Rooms on Either Side

porches, being separate from the entrance porch, give a privacy for the inmates of the house and their friends.

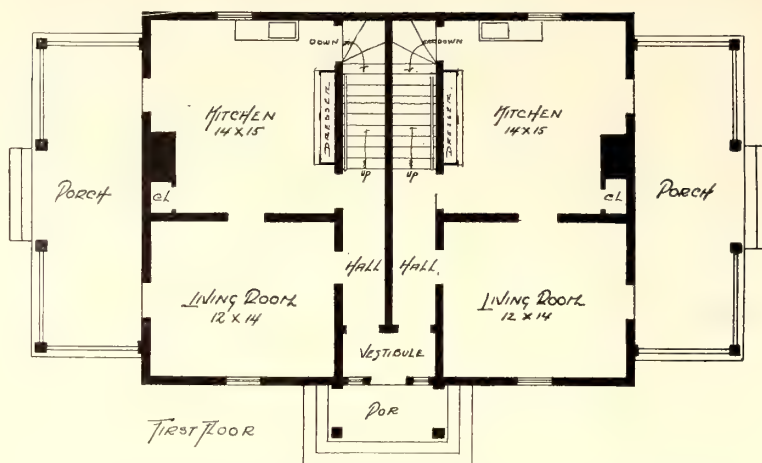
The whole house is furnished with corner block trim of white wood, and is painted white. An ornamental chair rail surrounds each room, below which the walls are painted white, and above they are covered with artistic wall paper decorations and the whole finished with a picture molding. The living-room has a neat mantel.

The second floor contains three bedrooms and a bathroom. The bathroom has enameled iron fixtures and exposed nickel-plated plumbing. There is a scuttle in the ceiling of the upper hall, that forms an entrance to the attic, which contains ample storage space. Only a part of the cellar is excavated, but it is ample to supply all necessary storage space for fuel, etc.

The large single house of the group, presented in Figures 4 and 5, costing \$3,000, is designed and built in the same manner as the small single house shown in Figures 1, 2, and 3. It has, however, a greater breadth, which is thirty-six feet and six inches, and a depth of twenty-four feet and six inches. The front door, which forms the entrance, is reached from a porch placed in the center of the house. On either side of the front door, which is glazed, are small lighted windows. The living porches of the house are placed at either side of the building.

The plans show a central hall with rooms on either side. This hall has an ornamental staircase with white painted steps and balustrades and an oaken rail.

The trim throughout the house is the same as the kind mentioned in the small house shown in Figures 1, 2 and 3. The openings between the hall, living, and dining-rooms are not so broad as to suggest a division, yet are of sufficient breadth to make a pleasing



6—The Plan of the Double House Has Separate Entrances for Each Family



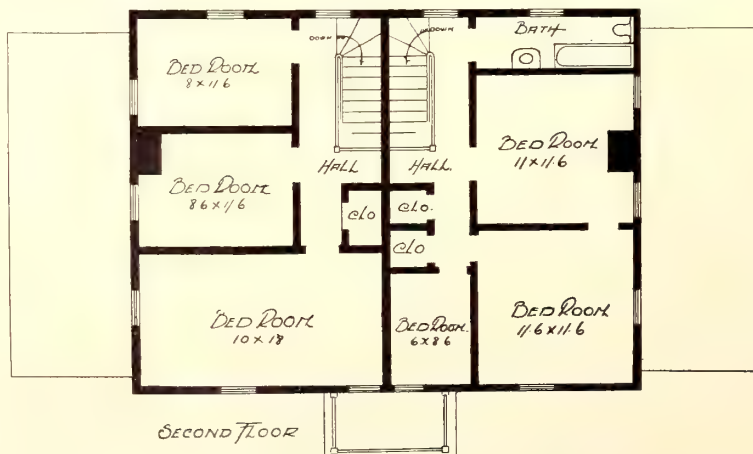
7—The Exterior of the Double House Is Quite the Same as the Large Single House in Its Exterior Features

is fitted with dressers placed on either side and it forms an access to the kitchen. The kitchen is fitted with all the best modern conveniences, including sink, laundry tubs, dresser, and range. Two chimneys, one at each side of the house, connect with all the rooms in both stories.

The second story contains four bedrooms, which are arranged in the best possible manner for light, air, and convenience, for each room is exposed on two sides. A large, well-fitted closet is provided in each room. The bathroom is provided with enameled iron fixtures and exposed plumbing. The attic contains ample storage space. The cellar is excavated under one-half of the building and is large enough for the storage of fuel, etc.

Figures 6, 7, and 8, present the same exterior of house as the large single house shown in Figures 4 and 5, except that it is built for a double house and arranged for two families, one on each side, and cost \$2,600. The general treatment of the exterior is much

the same as in the other designs; but within there are many differences. Glazed doors in the vestibule open on either side into separate halls for each family. Here are the stairs to the second story and to the cellar. Beyond are the kitchens and living-rooms. The second floor contains three bedrooms, as shown in Figure 8, showing two ways in which it can be arranged. There is storage space in the attic and a cellar under the entire house.



8—The Second Floor-plan Shows Two Ways in Which It Can Be Built

“Kings Cote”

A House Built for George J. Gould, Esq., at Lakewood, New Jersey

By Burr Bartram



THE beautiful house built for George J. Gould, Esq., at Lakewood, New Jersey, as presented in the illustrations shown herewith, forms a part of a scheme adopted in the building of “Kings Cote” as well as “Jays Cote,” a house of similar character.

These two houses are named after Mr. Gould's eldest sons, and are in harmony with “Georgian Court,” the residence of Mr. Gould, which is directly across the road, and, being so closely related to the latter, form one complete architectural scheme.

To build a house of this character and place it in a proper setting, and at the same time secure the privacy that is essential in all country houses, is the problem which the late Mr. Bruce Price, the celebrated architect, had to do when he solved the scheme which made “Kings Cote” possible. The problem was one of great difficulty and its solution has been a triumph for its designer.

In the building of “Kings Cote” Mr. Price accepted the Georgian style of architecture, which exhibits the most elaborate and finished expression of domestic architecture in this country, and has designed it in harmony with “Georgian Court,” which is also built in the Georgian style.

The site chosen for the house presented some natural advantages with its wooded characteristics and its level contour,

which gave ample opportunities for the building upon it of a house of this character.

A sweeping drive winds to the front porch, while at either end of the house, which is square in form, are similar porches, which are connected by a terrace and yet are sufficiently separated from the entrance porch to give them that privacy which is always so desirable in a country house. The house is built of stucco placed on brick walls, which forms the best foundation for stucco work. The steps and columns to the porches, the quoins, medallions, and trimmings, are of Vermont marble with a light greenish vein running through them, which harmonizes well with the soft creamish gray color of the stucco work.

Upon entering the house the visitor finds himself in a large central hall, at the end of which a broad staircase of Colonial style rises in a central run to a wide landing from which the stairs divide and rise in either direction. The staircase has a white enamel balustrade and a mahogany rail. The hall is trimmed with white wood and treated with white enamel paint. The paneled wainscoting is treated similarly. The doors are of mahogany. To the right of the stairway is the toilet, which is conveniently placed, and to the left is the entrance to the servants' hall and stairway, beyond which are the service hall and kitchen.

To the left of the hall is the drawing-room, which is



The Georgian Style of Architecture Was Accepted in the Building of “Kings Cote”



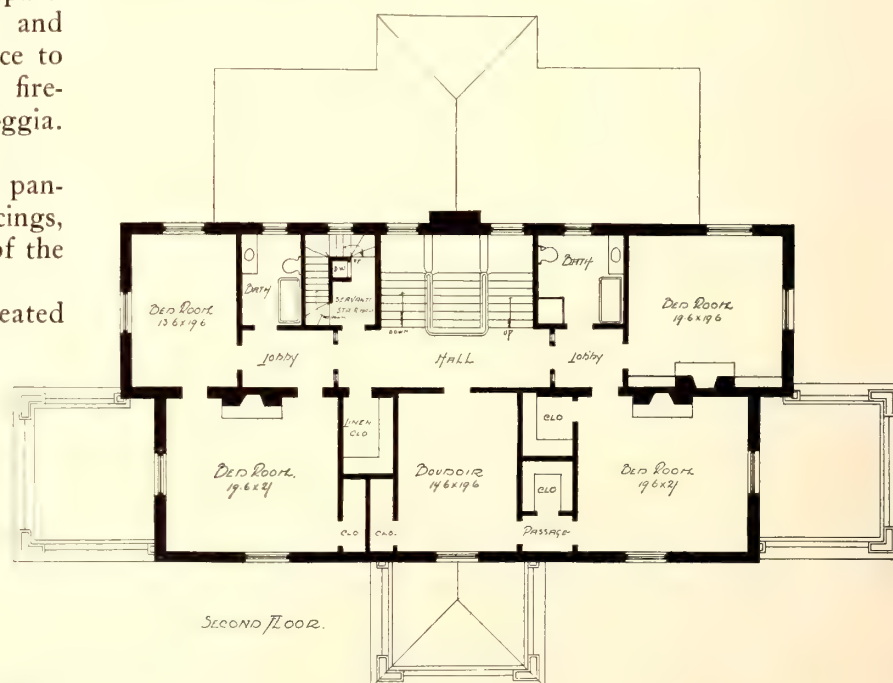
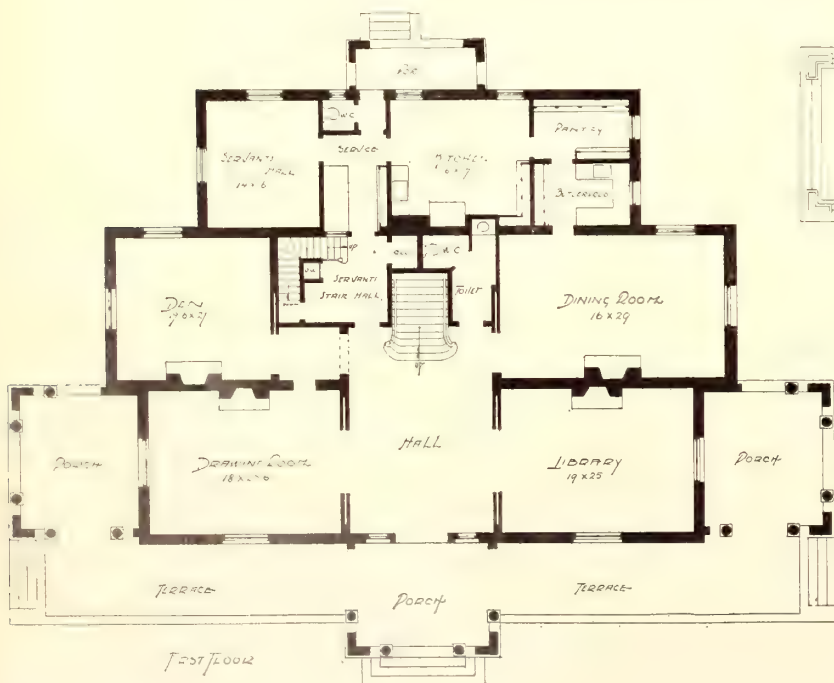
The House Is Built of Stucco with White Marble Trimmings

treated in the Colonial style, with white painted trim, and contains an open fireplace furnished with facings and hearth and a mantel of Colonial design. French windows open on to the porch, a loggia which forms a pleasant outdoor apartment. At the rear of the drawing-room is the den, and across the hall is the library, occupying a similar space to the drawing-room; and provided with a similar open fireplace and with French windows opening on to the loggia. Bookcases are built in on either side of the fireplace.

The dining-room is also in the Colonial style, with a paneled wainscoting and an open fireplace with marble facings, and hearth and mantel in harmony with the treatment of the apartment.

The second floor is trimmed with white wood and treated

with white enamel. It is divided into two suites, one of which contains two bedrooms and bathroom, and the other two bedrooms, bathroom, and boudoir. Three of the bedrooms

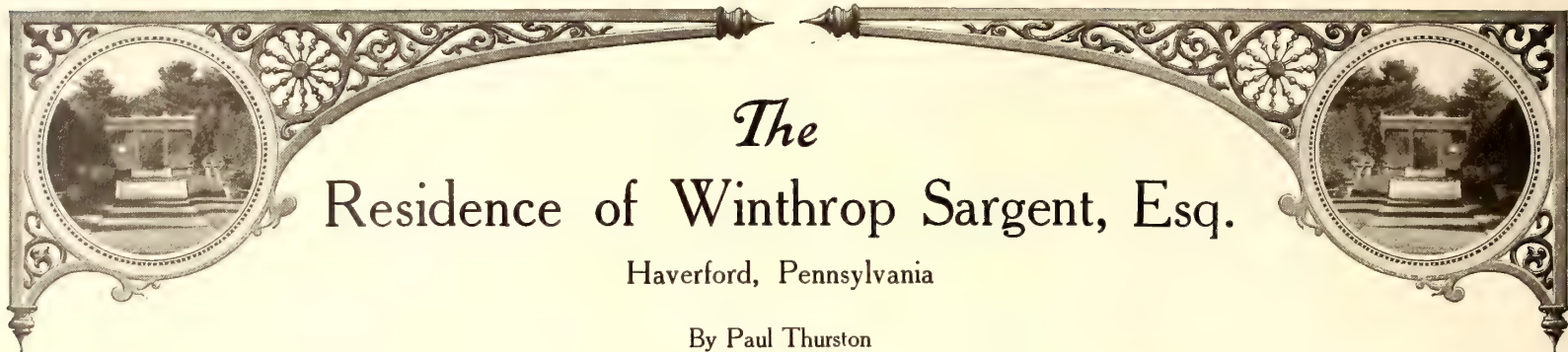


have open fireplaces furnished with tiled facings and hearth and mantels. The bathrooms are wainscoted and paved with tiles, and are furnished with porcelain fixtures and exposed nickel-plated plumbing. There are seven bedrooms and bathrooms on the third floor, and all are fitted replete.

The effect of the house is one of marked simplicity and delicacy, and the thought has been to produce a building with its structural lines to form the architectural feature, rather than to depend too much on a superfluous ornamentation.



The Front of the House Has an Entrance Porch with Ionic Columns of White Marble



By Paul Thurston



DRIVING along the road from Merion to Haverford and passing in front of the many well-kept estates and beautiful houses which command attention, there is none more picturesque and interesting than the one recently built for Winthrop Sargent, Esq., at Haverford.

The house stands well back from the street, with its end facing the roadway, and is most attractive in its combination of stone, stucco, and half-timber work. The first story is constructed of rock-faced stone laid in white mortar with joints well raked. The second and third stories are beamed with half-timber work, and with the panels filled in with rough plaster of a soft gray color, while the half-timber and all wood work is stained a soft brown, except the sashes, which are painted white. The roof is covered with slate. The beauty of the house is enhanced by the planting which has been done about it, and the vines which are beginning to climb over its walls, making it an artistic picture.

The house, setting well back from the highway, affords an opportunity for a broad expanse of velvet lawn which is bordered by a low stone fence. Beds of shrubbery are placed at the corners of the house and about the lawn, and massive maple and elm trees grace the outlines of the estate, at the front, sides, and rear.

The approach to the house is by an avenue which winds from the main road to the front entrance, beyond which it extends to the enclosed court in which is placed the stable and outbuildings.

A series of stone steps lands one in the vestibule, which is furnished with a tiled floor and paneled walls of oak. The hall is trimmed with oak, finished with Flemish treatment. The walls of the hall have upright battens of similar oak forming panels of plaster. The ceiling is covered with a rough plaster coat and tinted a creamish yellow. The staircase has a balustrade of handsome design, starting from a carved newel at the bottom of the stairway. Underneath the stairway is the

coat closet and lavatory, both convenient to the entrance. To the right of the entrance is the study, which is treated in the old Dutch style with Flemish oak trim and wainscoting. It is fitted up with built-in bookcases and a paneled seat, and has an open fireplace with facings and hearth of old blue tile.

The living-room is separated from the hall by an archway with a column forming the division. The double living-room is trimmed with oak of Flemish treatment. Both have paneled walls formed by battens which extend in an upright position to the frieze and cornice. The fireplace in the outer living-room is built of brick, and has a facing of Caen stone, a hearth of tile, and a mantel of simple design. The inside living-room, which is separated by a massive beamed arch, has a bay window at the front of the room furnished with a paneled seat. The inglenook contains an open fireplace with facings of Caen stone, a tiled hearth, a mantel neatly carved, and a paneled over-mantel. On either side of the fireplace are paneled seats.

From the living-room the porch is reached, which is, as it should be, isolated from the main entrance, giving privacy to the family circle. It is fitted up as an outdoor living-room, and beyond it is the garden, which is laid out in a formal manner.

The billiard-room, which occupies the entrance side of the house, is an interesting room. It is also trimmed with Flemish oak, and has a three-foot paneled wainscoting, above which the walls are treated in crimson. A plate rack above

extends around the room. The inglenook contains an open fireplace built of blue granite, with a shelf of hewn stone resting on stone corbels. At either side of the fireplace are paneled seats.

The dining-room is also trimmed with Flemish oak, and the walls are wainscoted to the height of five feet and finished with a plate rack. The ceiling is beamed and ribbed, forming panels. An attractive feature of the room is the combination buffet and cabinet which is built in the corner. The space below the



Beds of Shrubberty are Massed at the Corners of the House



The House Setting Back from the Road Affords an Opportunity for a Broad Expanse of Velvet Lawn, Enclosed by a Low Stone Fence

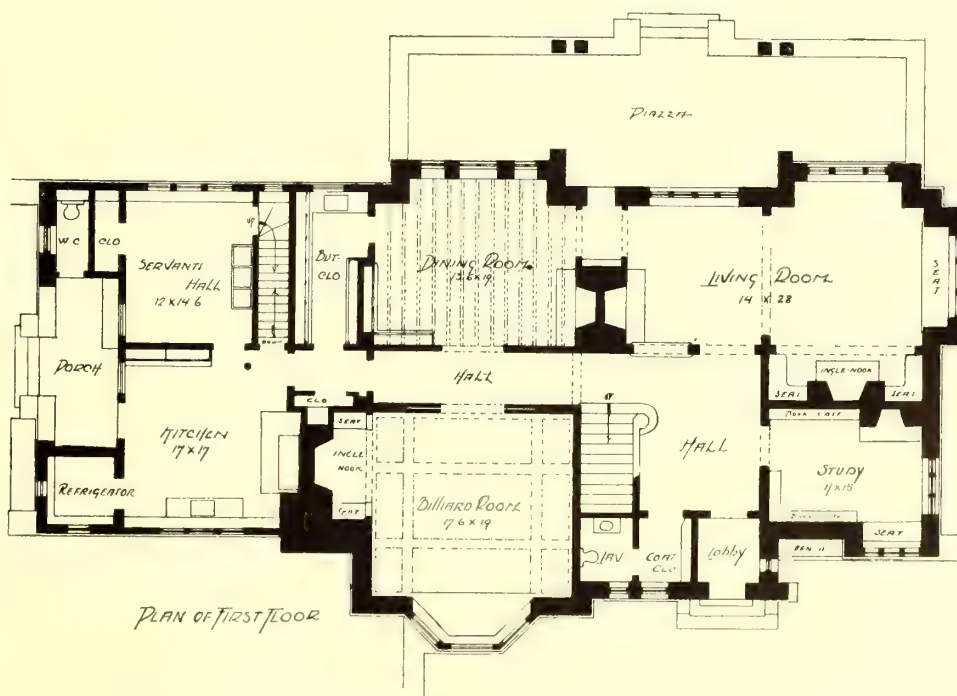
counterself is devoted to the china closets with leaded glass doors, while the space above is arched and provided with shelves. In the opposite corner of the room is the fireplace, which is built with a facing and hearth of Moravian tile, and a mantel of simple design with the shelf resting on carved brackets.

A door with the upper panel glazed in leaded glass opens into the butler's pantry, which forms the connecting link between the kitchen and the dining-room. This butler's pantry is fitted with drawers, dressers, and sink complete. The kitchen and its dependencies, including the servants' hall, which is now a proper adjunct to the well-regulated house, is fitted with all the best modern fixtures.

The second floor is finished off in a very handsome man-

ner, for the hall and each room are treated in one particular style and color scheme. The bedrooms are large and well lighted and are furnished with well-fitted closets. The bathrooms have tile wainscotings and tile floors, and are furnished with porcelain fixtures and exposed nickel-plated plumbing. The third floor contains extra rooms and bath and also ample storage space. The heating apparatus, fuel rooms, and cold storage cellar are placed in the cellar, which has a cemented bottom.

Mr. Lindley Johnson, of Philadelphia, Pa., who was the architect of the house, accepted the English half-timbered house as his prototype, and Mr. Sargent's is a very fine example of that particular style of work for which he has made a special study.



A Series of Stone Steps Lands One in the Vestibule from Which the Interior of the House Is Reached



The Hall is Trimmed With Oak and Is Treated in Flemish Style. The Walls Have Upright Battens of Simple Oak Forming Panels



Paneled Walls of Oak, a Fireplace of Moravian Tiles and a Combination China Closet and Buffet Are the Features of the Dining-room

An
Archway
Divides
the
Drawing-
Room
Which
Has
a Fire-
place
in
Each
Part



The
Agreeably
Furnished
Living-
Room
Is Pleasantly
Equipped
For
Every Day
Usage
and
Constant
Comfort



Hints About Shrubs

By E. P. Powell



THE American home, when not pinched for land, should invariably make more of the shrubbery. Yet a shrubbery apart from other lawns is a rare thing to be found. There are flower gardens, and shrubs are to be found scattered everywhere—this, of course, is better than nothing. But watch nature, and observe how she plants the hillsides, not only with groups of trees, but with great patches of bushes; and then take notice that these are the glory of the successive seasons. What can be finer than her collections of sumac, elder, hazel, honeysuckle, and her vines of bittersweet and clematis, climbing over and glorifying stumps and stones.

I propose to select a dozen or more of shrubs that are easily obtainable, and that will thrive in any garden soil. Among our natives you must make much of the dogwoods, the barberries, the wild plums and wild cherries, the spireas, the ribes, the evergreen mahonia, the highbush cranberry, the Judas tree, the cornus, in variety, the pawpaw, the stuartia, the hazel, and the dwarf maples. Nearly all of these can be found along the Atlantic slope, and many of them all the way from Maine to Florida. I have been surprised to find, in the river bottoms of the latter State, wild plums, pawpaws, Judas trees, growing with magnolias and cabbage palms. However, in New England we shall find that nature makes more of the brilliant fruitage plants, such as barberries and dogwoods. In the Southern States the stuartia and rhododendrons are among the finest.

Nature and man have united to increase this list of native shrubs, not only with a superb contribution from other countries, but with cross-breds. In my grounds I have something like twenty varieties of lilacs, most of them products of French plant-breeding. Among the best of these are Princess Alexandra, white flowered; Ludwig Spaeth, with immense panicles of a reddish purple hue; Pres. Grevy, a beautiful blue and double. Our mock oranges have become a great family, including a dozen or more superb sorts—to which I have myself been able to add three fine novelties. The old-fashioned hydrangea, so dear to our mothers, has been supplemented with paniculata; and during the last year another superb variety, introduced I believe by Mr. E. Y. Teas, of Centerville, Ind. This is quite as hardy as paniculata, with the additional glory of being nearly ever-blooming. Quite a number of European shrubs have become acclimated and nativized in our soils; among the best being the Tartarian honeysuckles, and some of the noblest of the thorn bushes, which can be found very frequently in the forest openings and along the hill sides.

Now for the list. This must always begin with the little Daphne that opens its flowers in April. This bush can be cut in March and the twigs blossomed in water. In May I count upon Forsythia, with its superb golden cloak of flowers, as all important. Almost with it, but lasting much longer, is our native Judas tree. This is one of the noblest shrubs in existence, although it may be grown large enough to be called a small tree. *Prunus triloba*, although doing its best in the Middle States, is quite hardy as far north as Buffalo. It is a wonder among shrubs for its exquisite pink flowers, as large as our miniature group of roses. Of the spireas, *prunifolia* is decidedly the best May-flowering. Lilacs are so profuse flowering, and so uniquely rich in color and fragrance, that one may plant them in great profusion. I have already named two or three of the best sorts, but no

one should be without the old common lilac, both purple and white. To these should be added a free planting of the Persian sorts. In fact nothing can surpass the purple Persian. Give these good soil and plenty of elbow room. The mahonia should find a place everywhere, as an evergreen shrub, glorious in leaf, and superb with its great clusters of golden flowers. The leaves are fine for winter cutting. It must, however, be covered from the winter sun, or it will lose its leaves. Among the viburnums the highbush, sometimes called a cranberry, is the most important. Its berries can be used for food exactly like cranberries, or can be left on the bushes to feed winter birds. The pine grosbeak and the waxwing are exceedingly fond of this berry, and will visit it in January. Then we have the one best bush for hedges, the Tartarian honeysuckle. It will sow itself about your fields and gardens, and can be left in many a corner to glorify its surroundings. Now add as many peonies as you please. For June you may add more spireas, and more viburnums if you please, as well as the later blossoming lilacs. *Deutzia crenata* is very generally hardy and a noble shrub. About this time we are having our syringas, and they extend through the whole month. Some of my seedlings blossom as late as the middle of July. Rhododendrons do not like some soils, but where they thrive should be planted in variety. The *Sambucus*, or elder bush, is really worthy of very general planting. Governor Seymour declared it to be the finest of all American shrubs. Later in the season we have the altheas in variety, and the hydrangeas. I am already making a list quite beyond the dozen which I had proposed. And yet I have limited the list quite within the means of a common country home. Not yet have I named the barberries, the euonymous, the cornus in variety, the weigalias, the ribes, and many more. The *exochorda* is a native shrub, hard to propagate, but easy to grow. It is covered late in May or early in June with very charming white flowers.

All this while I have merely hinted that shrub planting should consider the pleasure of the birds as well as ourselves. For their joy I would plant the highbush cranberry and the barberries, even if I did not delight in these bushes myself. In the arrangement of shrubs look out for the conventional. Not anything needs more the appearance of being dropped in by Nature. Rows of shrubs are only a little less distressing than rows of evergreens. Each group of shrubs should, if possible, bring out a succession of bloom. Shrubs that naturally hide themselves in the forest or glens should be allowed a certain measure of retirement. Your whole shrubbery should fit easily into the general idea of the homestead, rather than seem to exist for itself alone.

For winter decoration the red dogwood is invaluable, as its bark turns a brilliant crimson as cold weather approaches, retaining that color until spring. A group of this dogwood with barberries and highbush cranberry, in plain view from our windows, goes a long way to relieve the dulness or the whiteness of winter.

One needs hardly to add a word on the joy that shrubs bring and give, yet they have a deep personal and real value quite apart from the natural beauty they bring. If cared for properly—and sometimes even if neglected—they constitute permanent adornments to the home, adornments of grace and beauty that are offered by nothing else. Each year adds to their beauty as well as to their growth, and the money spent for shrubbery will always be regarded as well spent.



Some Notable Collections of Old Blue Staffordshire China

Decorated With American Views, Syntax and Wilkie Designs, and
the Arms of the Thirteen Original States

By Alexander M. Hudnut



HERE are only a few collections of Old Blue historical china in this country which are well known. Museums sometimes have a few stray pieces, but I have never heard of an important collection of dark blue Staffordshire being owned by a museum in America. About a year ago I went through a well-known museum in one of our largest cities, and was amused at a collection of blue historical plates and platters exhibited in a glass case. It contained in all some twenty specimens of blue historical plates and platters. They were not rare pieces and were in poor condition, many of them being cracked and chipped. On one of the least important of the platters was a label which read: "Very rare—only one known."

The best collections are owned by individuals. When I use the word "collection" I include only those classes of Old Blue ware indicated in the headlines of this article. There is a difference of opinion as to how many varieties constitute a perfect collection and also as to what constitutes a variety.

A ten-inch "Park Theater," New York, acorn border (Stevenson, maker); a ten-inch "Park Theater," New York, acorn border (John Geddes, maker); a six-inch "Park Theater," New York, eagle border (Stubbs, maker); are each a separate and distinct variety and yet some collectors are satisfied, and more than satisfied, if they

have one plate showing the "Park Theater" view. I do not consider this a debatable question, for the correct answer is too obvious. A perfect collection would, in my judgment, contain about three hundred pieces.

Some scenes occur only on the irregular pieces of a china set, but the large majority of subjects which collectors want are on the flat pieces such as plates, platters, and the trays

of soup tureens or gravy boats. These flat pieces are naturally the most sought after because they can be hung on the wall and form an attractive mural decoration. The best collections of Old Blue that I know of are hung on dining-room walls. It is important that the wall covering be carefully selected with the idea that it may be a suitable background for properly bringing out the dark blue color of the china. Cer-

tain shades of buff are considered to be the best color for this purpose. There are several methods of classifying a collection. Some prefer to have all the pieces made by certain

potters together, regardless of the views on the plates. For example, they will place in one group all of the plates made at the pottery of Enoch Wood & Sons; in another group will be the plates made by Stubbs or Stevenson, Ridgway or Clews. I have never considered this method of classification a good one. The best arrangement, I think, is to have all of the New York views in one group, the Boston views in another, and so on throughout the collection. The other style



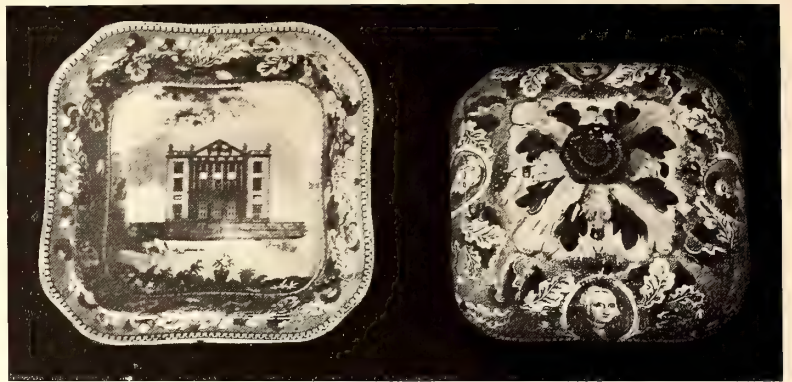
St. Paul's Chapel, Six-inch Plate. Church in Murray Street, Soup Plate, Ten Inch. St. Patrick's Cathedral, Six-inch, in the Collections of Mrs. Emma deF. Morse and Alex. M. Hudnut



Small Washbowl and Pitcher, Showing Old Capitol Building at Albany, Medallions of Peter Stuyvesant, Chancellor Kent, Washington, and Clinton. A Unique Specimen, the Only One Known. Property of Mrs. Emma deF. Morse



Gravy Tureen. Fulton Market on Tureen, Columbia College on Base. View on Cover Not Identified (the Specimen Is Included). In the Collection of Mrs. Emma deF. Morse



Albany Theater Vegetable Dish, Four Medallion Portraits on Cover. In the Collection of Mrs. Emma deF. Morse

of grouping is more technical and would possibly appeal to connoisseurs, but the majority of people who see a collection of Old Blue hanging on the wall are not well informed on the subject, and the arrangement according to localities appeals to the eye and seems to meet with more general appreciation. Some prefer to display their collections in cabinets enclosed in glass. This is an excellent way in cases where a dining-room is dark and where plates and platters would not show to good advantage on the walls. The very fine collection of Mrs. H. M. Soper, of New York, is displayed in this way, and so arranged that small electric lights on the inside of the cabinets can be turned on and reflectors throw the light directly on the china, at the same time shading it from the eye of the observer.

A good deal might well be said about how to collect Old Blue china, but this article is not intended to be an elementary treatise on the subject of china collecting. I wish some

one would take up this subject and write a book about it. The young collector is like a baby learning to walk. He falls down many times and his steps need guiding. Some admirable books have been written dealing with blue Staffordshire from various points of view, and each one of these works presents to the collector a fund of information which it has taken time and pains to get together, but none of them tell him how to collect. By far the best work I have read relative to American views on blue Staffordshire is the well-known volume by Mr. R. T. H. Halsey, of New York. This book with its careful descriptions, its accurate historical references, and its magnificent illustrations is a necessity to a collector. Mr. Barber in his admirable work gives classified lists of the various pieces which he knows about, and there are other books which might be mentioned, but after all, I come back to my original statement which is that nothing has been written on this subject which tells a collector



Group of New York Views in the Collection of Alex. M. Hudnut Princeton, New Jersey



Some Boston Pieces and Miscellaneous Views in Collection of Alex. M. Hudnut



Dutch Church at Albany, Vegetable Dish. Medallions of Washington, Jefferson, Lafayette, and Clinton on Cover. These Form Part of the Collection of Mrs. Emma deF. Morse



Baltimore Alms House Sugarbowl. Teapot with Baltimore Assembly Rooms on Base, Alms House on Neck and Hospital on Cover. Baltimore Masonic Hall Cream-pitcher. Collection of Mrs. Emma deF. Morse

how to collect, and the old time-honored method of learning by experience is what every collector has to fall back upon. There are dealers by the scores. It is well to find out by careful inquiry which of them are reliable. Some have been known at times to deal in counterfeit plates, but there are a number of honest dealers whose word can be trusted and who can be of the greatest help to young collectors in steering them straight, and who can be relied upon not to overcharge. I fear that I have wandered a little from my subject, for it is the purpose of this article to outline briefly some of the fine collections of Old Blue china with which I am familiar. The owners of these collections have been most courteous in furnishing me with whatever information I have asked for.

In the limited space at my disposal I can not do full justice to any of the fine collections I may mention. One of the most energetic and successful collectors of the past decade is Mrs. Emma deF. Morse, of Worcester, Mass. She has

accomplished the almost impossible task of getting together 280 varieties of dark blue historical ware. Some of the rarities of this collection are shown in the illustrations. Mrs. Morse is the fortunate possessor of an "Albany Theater" view and I do not know of any one else who has it. She also has the little seven and one-half-inch "Hurl Gate, East River" plate and the six-inch "Park Theater," New York, eagle border plate—both of them exceedingly rare pieces. The old "Capitol at Albany," washbowl and pitcher, is without doubt the most valuable specimen of this superb collection. There are only about ten pieces scattered among the different collections of the country which Mrs. Morse needs to make her collection complete. I do not hesitate to say that, within my knowledge, this is the finest collection of dark blue Staffordshire in America.

Mr. Eugene Tompkins, of Boston, has a collection remarkable for its completeness and the artistic way it is hung.



A Few Dr. Syntax Subjects in the Collection of Alex. M. Hudnut
Princeton, New Jersey



Showing a Small Part of the Collection of Mrs. James B. Neal
Easton, Pennsylvania



Part of the Well-arranged General Collection of Mrs. Marshall L. Hinman, Dunkirk, New York

This decoration appeared on some of the pieces of a dinner set, also on a few washbowls and pitchers. The easiest ones to get are the Arms of New York, Rhode Island, and South Carolina, which generally come on dinner or tea plates.

The platters of a china set are far less numerous than the plates, so the rarer Arms views appear on platters and the irregular pieces of the set.

The Arms of Pennsylvania come only on a twenty-one-inch turkey platter and it is quite possible that there was only one made with each dinner set. The Arms of Maryland appear on a washbowl and pitcher. The writer has a good specimen of it in very dark blue. Mrs. Morse has an unusual Maryland Arms piece. It is a shallow pudding dish,

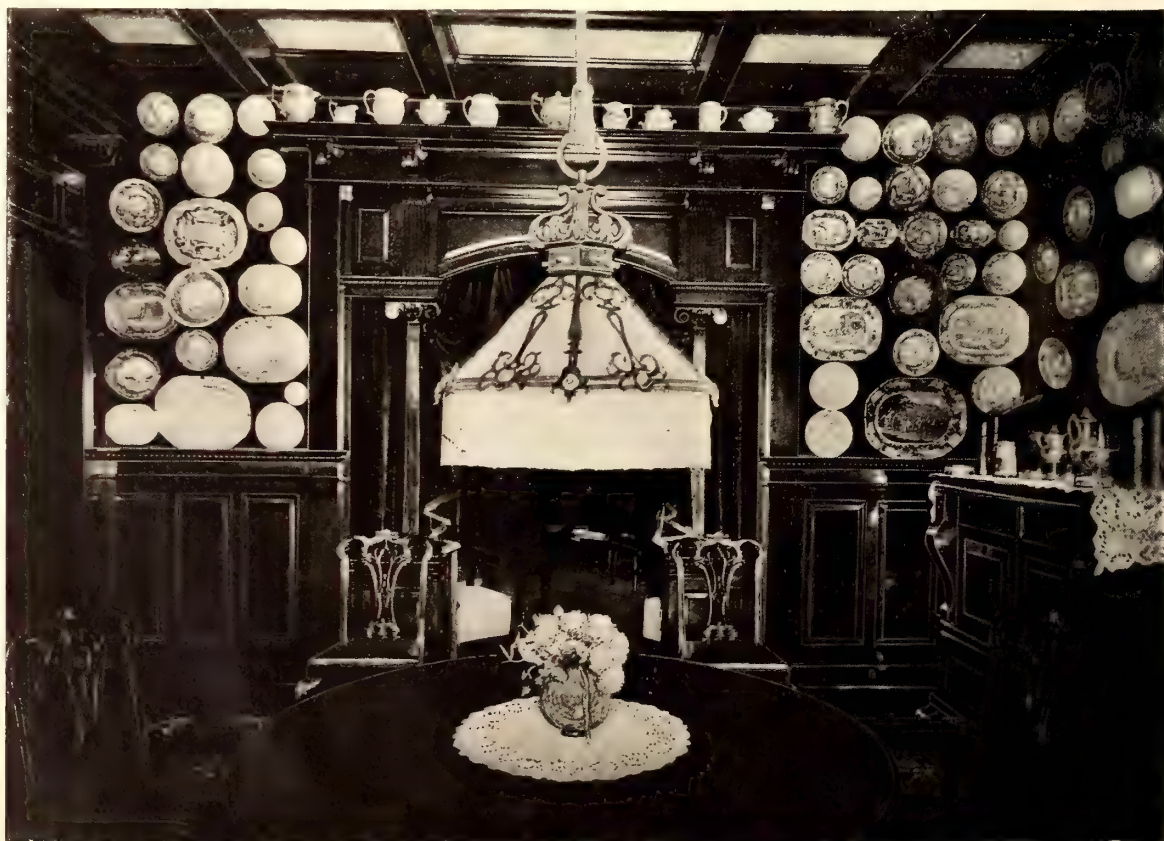
Our illustration shows two sides of his dining-room and we can distinguish a few of his choice pieces. The very rare fourteen-inch platter, "Junction of the Hudson River and the Sacondaga," shows quite plainly. I imagine I see also the little seven and one-half-inch New York "Hurlgate, East River" plate, the "New York Governor's Island," ten and one-half-inch and the eight and one-half-inch "New York Bay" plates. I know of only three collectors who have the last two named plates. They are great rarities. Mr. Tompkins is fortunate in owning a "Harvest Home" platter (Dr. Syntax set), a "Pennsylvania Arms" platter, and a "Connecticut Arms" gravy boat. It would be far easier to tell what he has not got than to enumerate his best pieces. He needs two of the Arms set, three Syntax views, and about sixteen American scenes. It is a curious fact, and fortunate for Mr. Tompkins, that his wants in the plate line are not nearly so rare as his possessions. I credit him with having 242 varieties. It is a truly marvelous collection.

It might be well to interrupt these sketches for a moment and consider briefly that rare series known as "Arms of the States." Twelve of the thirteen original States are commemorated by having their Arms or State seals reproduced on a set of dark blue Staffordshire. The maker was T. Mayer, supposed to be one of the firm of Mayer Brothers, who purchased the pottery of Joseph Stubbs in 1829.

eleven and one-half inches across and three inches deep.

The Arms of New Jersey, Georgia, Delaware, and North Carolina occur on platters. Connecticut has the distinction of being represented on a gravy boat, its cover, and the tray which goes with it. It is said, also, to come on a pitcher, although I have never seen it. I know four collectors who have this scarce Arms piece. Two of them have gravy boats with the covers (without the trays), and two others are happy possessors of the trays. It is possible that under some former ownership these gravy boats and trays were in a united state.

The Massachusetts Arms view occurs on small vegetable



Dr. Syntax Harvest Home Platter and Other Rare Pieces in the Collection of Mr. George Kellogg, Amsterdam, New York

dishes and also on small platters. The Arms of Virginia appear on a vegetable dish and cover, also on a washbowl and pitcher. I think no one has ever found the Arms of New Hampshire on a piece of dark blue ware and yet it is hardly probable that the maker of this set overlooked it. He was making pottery to sell in the American market and was decorating it with designs which he thought would be popular in the States. Why, then, should he have slighted one State when there were only thirteen? Possibly he was superstitious! That he knew there were thirteen States is attested by the fact that the blue mark stamped on the back of this ware has for a background thirteen stars and the

includes many rare subjects. She has probably the best known specimen of a Pennsylvania Arms platter. It is perfect in every particular and is what collectors call a "proof" piece. She has a ten-inch soup plate, "Church and Buildings in Murray Street"; a six-inch "St Paul's Chapel," New York, with a medallion portrait on it and the rare little six-inch "Harvard College" plate. Many other equally choice pieces in this collection I would like to mention but space will not permit.

Mr. R. T. H. Halsey's collection of American Views on dark blue Staffordshire is well known. Nearly every one who is interested in this kind of pottery has read Mr. Hal-



Part of the Collection of Mr. Eugene Tompkins, Boston, Massachusetts. A Good Example of Artistic Grouping

motto "E Pluribus Unum." This seems to contradict the supposition that he might have been superstitious about the number thirteen. My theory is that this piece exists somewhere and will eventually be found. It may have decorated some uncommon or easily broken piece of the set, such, for example, as the ladle of a tureen. This set of twelve Arms pieces is the most difficult part of a collection to complete. Eight of them, well known to all collectors, are extremely rare. I do not know of any collector who has more than eleven.

Mrs. F. W. Yates, of Rochester, is well known as the owner of a fine collection of blue china and as a frequent contributor to the columns of the "Old China Magazine" during the life of that periodical. Her collection of 216 pieces

sey's book and knows that the majority of illustrations in that excellent work are taken from pieces in his own collection.

The collection of Mrs. James B. Neal, of Easton, Pa., is remarkable, not so much for its numerical strength, as for the number of unique pieces which it contains. The twelve and one-half-inch platter, "View near Catskill on the Hudson River," by W. G. Wall, Esq., is one of the gems of this collection. So also is the fifteen-inch platter, "Junction of the Hudson River and the Sacondaga," and the nineteen-inch "Esplanade and Castle Garden" platter. The usual size of an "Esplanade and Castle Garden" is seventeen inches. This is the only one I know of which measures nineteen inches. Mrs. Neal has a "Dutch Church at Al-

bany" dish, a "Church and Adjoining Buildings Murray Street" soup plate, a proof "Arms of North Carolina," and the rare little "St. Patrick's Cathedral" plate. I regret the necessity of leaving this collection without mentioning some of the other unique specimens which it contains. There are in it altogether about 174 pieces.

Mr. George Kellogg, of Amsterdam, N. Y., has an attractive collection of Old Blue, very tastefully hung in

All fine collections are alike up to a certain point; they differ in the rarities they contain, the condition of their pieces, and their numerical strength.

Mrs. H. M. Soper, of New York, has succeeded in getting together, in a short time, a truly fine collection. She has all of the Arms pieces except one and needs only one or two subjects to complete her Syntax series. Mrs. Soper's collection easily ranks among the best in the country.



Hurl Gate, East River, Seven and One-half Inch Plate by Stubbs. Only Two Are in Existence



Masonic Temple, Philadelphia, Eight Inch Plate by Ridgway. Very Rare

his dining-room. I see in the illustration a "Harvest Home" platter. Mr. Kellogg obtained this rare piece at the celebrated Burritt sale, in New York. This collection is strong in Arms and Syntax pieces. Outside of these the rarest views are a six-inch "Harvard College" plate, a "Battle of Bunker Hill" platter, a "St. Paul's Church, Boston" platter, and several choice medallion plates.

Our illustrations show the interior of the treasure house of Mrs. Marshall L. Hinman, of Dunkirk, N. Y. The plates are hung with mathematical accuracy and everything is suggestive of order and symmetry. This collection is a large one but it goes beyond the boundaries of my article.

The same may be said of the collection of Mrs. Richard V. Lindabury, of Bernardsville, New Jersey.

I would like to mention the following rare pieces as characteristic of this collection:

"Governor's Island," New York, ten-inch soup plate.

"New York Bay," eight and one-half-inch plate (Stubbs).

"Fort Gansevoort," eight-inch plate.

"Fulton Market," New York, soup tureen.

A tea set of rare Baltimore views.

My own collection contains two hundred varieties, all of them, with two exceptions, in proof condition. A few of my favorite pieces are:



Governor's Island, New York, Ten Inch Plate. One of the Most Beautiful and Rarest of American Views



Octagon Church, Boston, Ten and One-half Inch Flat Plate, Open Edge. Very Rare

It includes every variety of color in historical ware. It is strong in English views, cup plates, luster ware, etc. I can not do it justice in the brief space at my disposal.

Mrs. Hinman has made no specialty of dark blue ware, although she has many choice pieces in her collection.

These short outlines of collections can not help resembling each other in many particulars.

"Brooklyn Ferry," platter, eleven and one-half by nine inches.

"Hope Mill, Catskill," N. Y., tray of soup tureen, fourteen by ten and three-fourths inches.

A seven-inch plate, Dr. Syntax, "Sketching the Lake"—the picture is dark blue on a white background—as shown in head-piece illustration.



Symetrical Arrangement of Miscellaneous Subjects, Collection of Mrs. Marshall L. Hinman

"Columbia College," eight and three-eighths-inch, acorn border, with medallion of DeWitt Clinton.

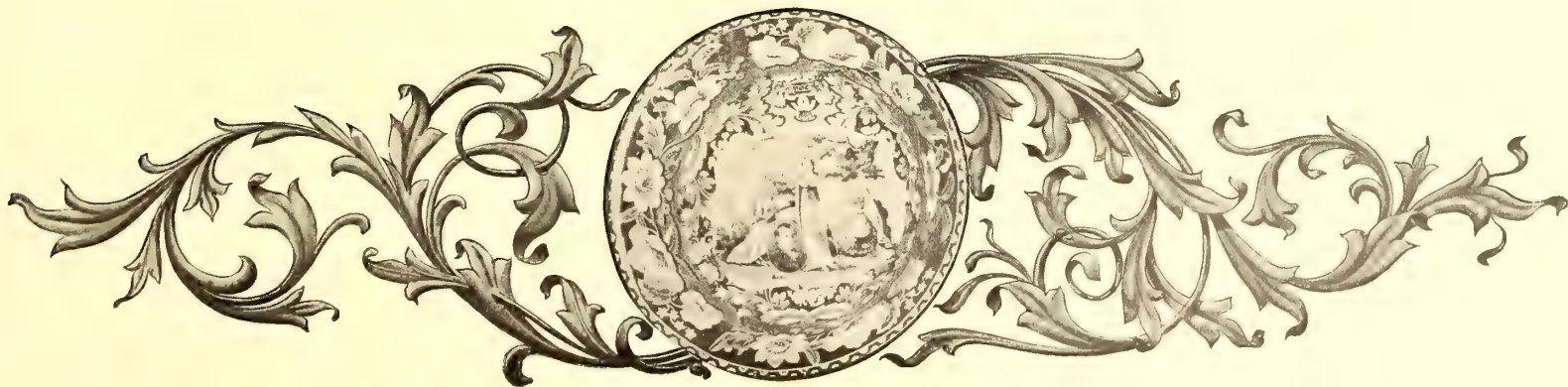
"Octagon Church, Boston," ten and one-half-inch flat plate, open edge, shown in illustration. This view is very rare in a flat plate.

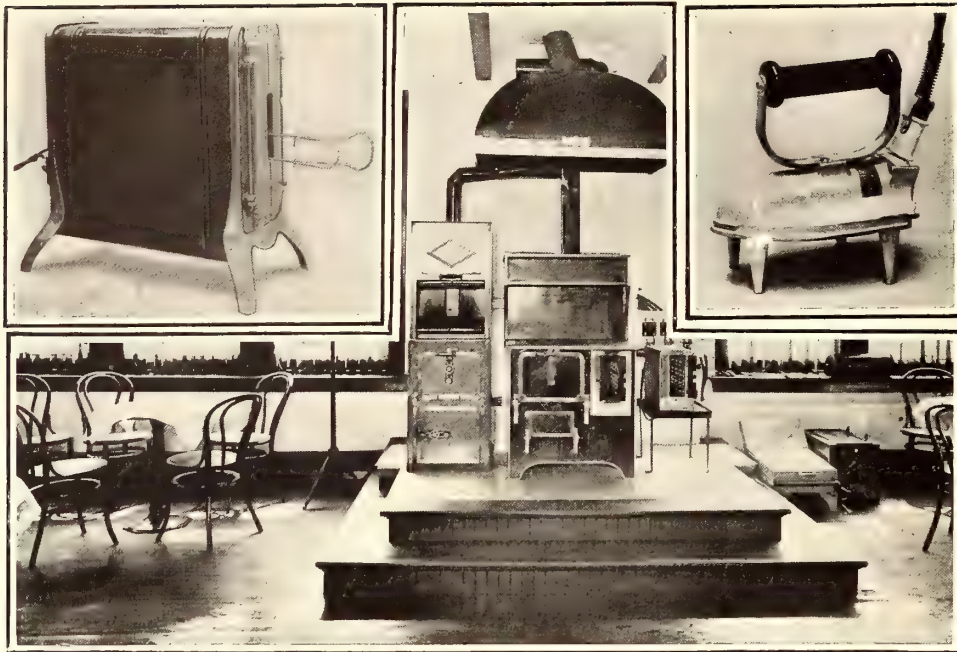
"St. Patrick's Cathedral," Mott Street, New York, six-inch plate (Stevenson).

A word about the value of this historical blue china. I deprecate the tendency toward absurdly high prices even for the rarest views.

At the Macy sale, November 23, a "Sandusky" platter sold for \$220. I have no idea who bought it, but I know it was

not worth over \$100. The color was bad (a light purplish blue), and Mr. Macy was unable to sell it for \$150 while it remained for months among his stock. I repeatedly refused to buy it at this price. Those people who are not well informed as to values are often responsible for inflated prices. They meet at an auction and bid against each other regardless of what the piece is worth. If a collector wants a piece of blue china badly he will sometimes pay a ridiculous price if he can afford it, but he will know, all the while, that probably he could not sell it for half what he paid. There is no standard of values. But then there is no limit to the enthusiasm and vagaries of collectors.

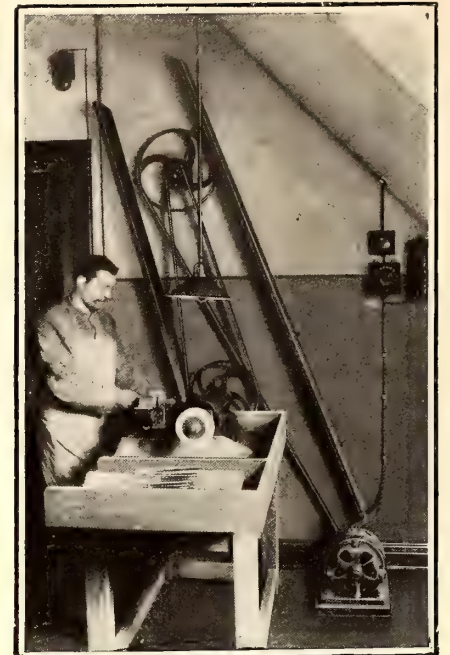




An Electric Broiler

Electric Flatiron

A Restaurant Equipped With an Electrical Kitchen



The Knife-polishing Machine

Some Novel Uses of Electricity



THE increased use of electricity in every branch of industry is surprising even to the most ardent advocates of this mysterious form of energy. Not only has electricity invaded the territories occupied by all other forms of energy, but it has actually created new fields of its own. This is particularly marked by the present electrical invasion of our homes, where labor-saving devices were never thought of until electricity showed its wonderful adaptability to all classes of work. Electric light had scarcely ceased to be a novelty when the electric fan was introduced and then the sewing machine motor. In the past few years more attention has been paid to electric heating devices. In the nursery and sickroom electric milk warmers and devices for heating water are becoming a necessity, while the easily

is a corner in an electrically equipped bathroom. On the washstand is a water heater which will quickly heat enough water for shaving. At the right is a massage vibrator which is portable and can be connected to any lamp socket. The device is simple and can be easily operated by any one. Beneath the bowl is an electric radiator. Electrically heated curling irons, electric cigar lighters, electric chafing dishes, etc., are but a few of the many electrically heated devices now in common use. Contrary to the popular impression the cost of electricity for operating these various household devices is not very great. The following table not only shows the economy of electricity but also gives an idea of the great variety of uses to which it is put.



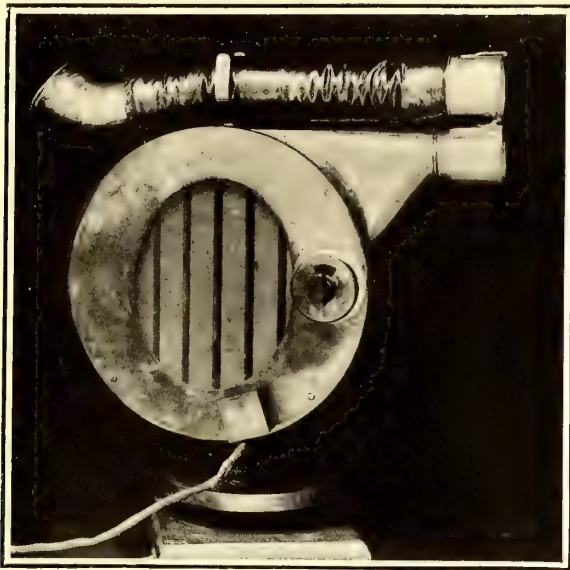
The Electric Hair-drying Machine

regulated electric pad threatens to entirely displace the hot-water bag. Quilts and comfortables and even rugs and carpets are now wired for electrical heating. These are connected to the ordinary lighting circuit by means of the usual flexible cords. Their advantages for the nursery or for any bedroom will be apparent. Pictured in one of our engravings

Article	Period of Operation	Cost during that period at 10 cts. per K. W. H.
Chafing Dish	20 minutes	1 1/3 cts.
Pint Baby Milk Warmer and Food Heater	6 "	1/4 ct.
Quart Food Heater	6 "	1/2 "
Coffee Percolator	20 "	1 "
Stove, 6 inch	15 "	1 1/4 cts.
" 8 inch	15 "	2 "
Broiler, 9 x 12 inch	15 "	3 "
Curling Iron Heater	15 "	3/4 "
Heating Pad	per hour	1/2 "
Iron, 3 1/2 lb.	30 minutes	1 1/4 "
" 6 lb.	30 "	2 1/2 "
Frying Pan (7 in. diam.)	30 "	2 1/2 "
Waffle Iron	12 "	1 "
Tea Kettle	20 "	1 "
Glue Pot, 1 quart	20 "	1 "
Soldering Iron, 2 lb.	30 "	1 "
Doctor's Sterilizer	30 "	5 "
Bathroom Radiator	30 "	5 "

Electric flatirons are now quite extensively used in the kitchen and sewing-room. Travelers find them most useful for pressing out clothing that has been mussed or creased in packing; ladies find them useful for ironing out flimsy shirt

have been invented. The electric range is a convenient little piece of kitchen furniture whose chief charm lies in the fact that it is ready for instant use at the touch of the switch, and immediately after the cooking is done, the power can be cut



Rear View of the Hair-drying Machine

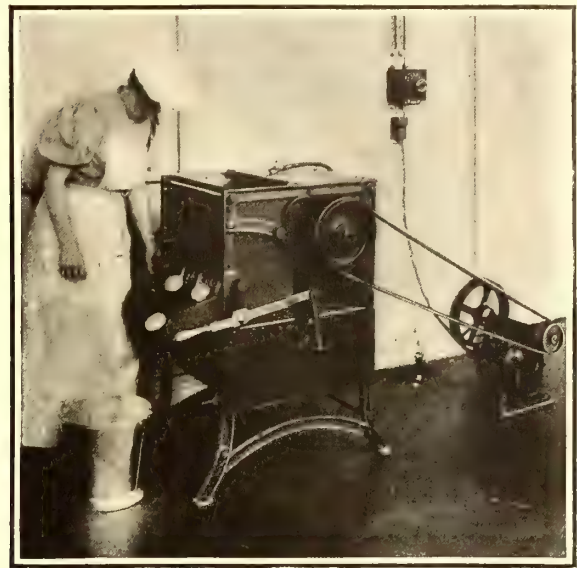
waists and lace collars and cuffs which they would not dare intrust to the usually careless laundress. Outside of the household electric flatirons are commonly used in tailoring shops of all classes, and even architects and engineers have begun to employ them for smoothing out blue-prints and plans.

One of the latest electrical novelties is the hair-drying machine. This combines both electric heat and electric power. It consists of a casing which incloses coils of resistance wire and an electric fan. The fan sucks air into the casing over the resistance wires and the latter heat the air to any desired temperature under control of the operator. A flexible tube



Electric Machine for Chopping Cabbage

communicates with this casing and receives the current of heated air, permitting the operator to direct the current where desired. When properly handled twelve persons can be treated in one hour at a cost of but a fraction more than one cent each. The kitchen offers an excellent field for electrical apparatus. Already many electrical cooking outfits



Electric Potato-paring Machine

off. This results in a great saving of expense, doing away entirely with that wasteful consumption of energy which is necessary in coal ranges in keeping the fire going so that the range will be ready for use. The electric range also possesses an advantage over the gas stove, its closest competitor, in that no match is required to light it, and it is entirely free from odors. One of our illustrations shows a small electric broiler which will cook a medium-sized steak at a cost of but two cents. The electrical restaurant, shown in another of our illustrations, serves to exemplify the convenience and adaptability of electricity to kitchen work. It will be seen that the cooking apparatus is placed in the center of the restaurant with no attempt to screen it off from the rest of the room. Here the manager, in a business suit, does the cooking while chatting with his patrons with no fear whatever of



Washing Dishes in an Electrically Operated Machine

smoke, soot, or ashes spreading out into the room, while the cooking smells are drawn up through a ventilator just above the range. A whole chicken can be roasted in a quarter of an hour and lamb chops can be broiled in three minutes. This rapid cooking results in retaining the juices of the meat.

The advantages offered by the kitchen for the development of electric power devices have not as yet been fully realized. The kitchen is the workshop of the house, and affords a splendid opportunity for labor-saving apparatus. A well-ordered kitchen should have its electric fan set in the wall to draw off the heated air and odor of cooking from the building. Small electric refrigerating plants are provided to do away with the inconvenience of hauling ice into the house. As yet electric labor saving apparatus has not been introduced to any large extent in private houses, but some of the accompanying illustrations, which show its uses in hotels, will be suggestive of its possibilities in the home. Here may be seen the electric dishwasher, the dishes being piled into an open wire basket and dipped into boiling water which is whirled rapidly against them by an electric motor. The same operation repeated in three different vessels will thoroughly clean the plates, after which an electric fan is used for drying them. The entire operation requires but a few minutes. The knives can be scoured and polished by passing them between a pair of rapidly rotating buff-wheels, and an emery wheel is provided for sharpening the steel blades. But the use of the electric motor in the kitchen is not confined to cleaning apparatus. A number of electrically driven machines have been devised for preparing food. Two of these are shown herewith. One of them consists of a cabbage-chopping machine, and the other is a potato-paring machine. The latter discharges potatoes fully pared except for the eyes, which can readily be cut out by one of the attendants. It will be evident that these are but a few of the different uses to which electric power can be applied, and it is expected that the next few years will add wonderfully to the present variety of electric labor-saving devices for kitchen use.

While the tendency of the day is undoubtedly toward the increased use of electricity in the household, its general



A Corner in an Electrically Equipped Bathroom

progress is dependent on various conditions. The popular prejudice that electricity is expensive in any form is frequently supported by the bills which come in for its use for light. No general means has yet been devised to satisfy consumers that the bills for electricity are fair and correct. This prejudice must be overcome before it can be applied to miscellaneous household matters.

The Public Value of the Private Garden



HERE is no easier or more delightful way in which the private citizen can contribute to the embellishment of his town or city than by the maintenance of a flower garden. Often enough it is quite impossible to do this, for land is scarce and valuable in crowded places, and the very persons who might be those most willing to help local embellishment in this way are precluded from doing so from the lack of land. The late Mr. Cornelius Vanderbilt pulled down a number of costly dwellings, purchased for this purpose, that he might arrange a small garden on one side of his great Fifth Avenue palace; Mr. Andrew Carnegie followed the same plan in the garden attached to his New York house; one or two other wealthy citizens of the metropolis have done the same; but the results have scarcely compensated for the cost, and the expense, in any event, is prohibitive in all except very occasional instances.

Singularly enough it is the citizen of moderate means who can do more in this direction than his wealthy fellow townsman on the avenue. The man who does not want to live on a costly street, or does not have to do so, will occupy a more

modest house, and may perhaps have a bit of land before his front windows. It is a public duty to make the best of every such opportunity. The labor is never great; the cost is never large; but the results are always satisfactory. Even a single vase of flowers, or a box of blooming plants over the door or at the lower window sills, will accomplish much and be real notes of interest and of life in what might otherwise be solid expanses of solemn brown stone or scarcely less varied red brick.

Moving out into the suburbs the opportunities for effective work become greater. The further we get from the high-priced center the more ample the opportunities and the greater the responsibilities of the house owner. A garden of some size may be a matter of some expense; its care may entail a certain amount of labor, and it may, in short, be some "bother." But the duty can not be escaped. If one does not care for a garden for one's own sake, one should certainly maintain it as a matter of pride and as a duty due one's neighborhood. The personal interest will be sure to come, and come quickly; for plants are fascinating things to watch grow, and they are the most brilliant and the most helpful of all exterior decorations.



By S. Leonard Bastin



COMPETITION in the natural world is so keen that those individuals which can not at least come up to a certain standard must soon be outstripped by others in the great struggle. As a consequence it is of the utmost importance that species which find themselves at a disadvantage in any way should summon all their resources together to strengthen their position. To this end we may attribute many of the remarkable developments both in the animal and vegetable kingdoms.

Among plants several of the most interesting examples of this particular form of evolution are to be seen in the case of species which have adopted unusual methods for the advertisement of their flowers. As every one knows a number of species are wholly or partially dependent upon the visits of insects for the fertilization of their blooms. In order to make the presence of the flowers known, these plants have resorted to the practice of surrounding the essential organs with gaily colored corollas. For some reason which it is not very easy to understand, a large group of plants representing

widely diverse genera have been unable to produce attractive blossoms; yet it is necessary that these flowers should be cross-fertilized by insect visitation. Nothing daunted, these enterprising species make up their deficiencies to such good purpose that quite often they end in outstripping their more fortunate rivals.

An excellent instance of a species which has resorted to rather unusual methods of drawing attention to its flowers is *Poinsettia pulcherrima*. This plant, not unfrequently cultivated under glass on account of its decorative qualities, is a native of Brazil, and a member of the great *Euphorbia* family whose representatives range almost all over the world. The *Poinsettia* with its small cluster of greenish flowers would be scarcely noticeable among the mass of greenery surrounding the plant in its tropical home; but the species is well able to take care of its own affairs, for it has converted the terminal leaves of the blooming shoot into brightly colored bracts, so that each group of flowers is surrounded by rays of the most vivid crimson imaginable. An interesting side light as to the origin of the bracts is seen in the fact that



Salvia Horminum Rubrum. Southern Europe
A Flower which Advertises Itself By Its
Variegated Foliage



Bougainvillea Glabra



Pieris Japonica. The Terminal Shoots of this Plant
Are Bright Scarlet when the Flowering
Season Is On

at times the upper leaves are partly green and partly red. Another genus of South American plants—*Bougainvillea*—has found it desirable to adopt a special mode of advertising its flowers, although these are provided with a proper corolla, and are almost as attractive as some of the smaller species of *Primula* for instance. But they are a dull yellow color and would be likely to appear insignificant among the leaves of the plant itself were they not surrounded by three large bracts colored in a very striking shade of lilac. *Bougainvillea*



Aechmea of Brazil. The Leaflets Surrounding the Flower Are Bright Pink, Although the Actual Flowers Are Not in the Least Attractive

villeas are climbing plants, and as the flowers and their showy appendages are produced in great masses, the presence of the floral organs is announced in a most striking fashion to all passers by. Indeed a *Bougainvillea* in full bloom would be seen from a great distance off, and one could conceive the insects being attracted from all parts.

Of course in composite flowers, the most showy portions of the blooms really serve no other purpose than to advertise the real essential organs. Daisies, Chrysanthemums, and Asters are typical of this special formation, when in their single state. If we take a specimen of any of these flowers we shall find that the outside circle of colored rays is composed of nothing more than petal-like processes. They are perfectly sterile; in fact their sole office in life is to look attractive. The central mass of yellow material is composed of hundreds of flowers, destitute of petals but all provided with the organs of reproduction. By this clever arrangement the composite flowers are able to produce a far greater number of seeds than is the case in the majority of orders.

In a Southern European *Salvia* (*S. horminum rubra*) is to be seen yet another mode of drawing attention to somewhat unattractive flowers. This plant has rather small blooms in the regular labiate style, sprouting out from the axils of the leaves. With about two-thirds of the shoot the foliage is of an ordinary green color, but in the remaining terminal portion the leaves are first of all partly and then finally wholly colored in bright pink. Thus during the blooming season this decidedly humble plant is transformed into a most striking object, so much so that it is recognized as a valuable border plant in the garden. It is notable that as the plant passes from its blooming stage the pink gradually becomes green, proving that they are actually leaves which have taken upon themselves the rather unusual office of helping the flowers to make known their presence.

As all botanists are aware, red is frequently associated with growing shoots. It is interesting to observe that this point has been turned to good account in the case of a Japanese indigenous species called *Pieris Japonica*. The plant is shrubby in habit and is nearly allied to *Arbutus*. In the spring the *Pieris* produces its small white flowers, which are often so sheltered by the leaves as to pass almost unobserved. But notice what takes place at this season. A little bit ahead of the opening of the blooms the fresh growth commences from the shoots, and the young leaves are of a most brilliant scarlet. Passing insects can not fail to mark the bright display of color, and, alighting upon the leaves, soon become aware of the presence of the slightly fragrant flowers.

It would seem that one will not be very wrong in supposing that strongly marked leaf coloration is generally present to make the plant conspicuous. Such genera as *Coleus*, *Codiaeum*, to mention only two, often display the most gorgeously colored foliage although their flowers are comparatively insignificant. A species of *Aechmea* has been found in Brazil in which the leaflets surrounding the flower stem are tinted with bright pink although the actual flowers are not at all attractive. Many observers have proved up to the hilt that insects exhibit a strong tendency to settle on a colored object, and it can be imagined that if the specimens could once be induced to alight on the leaves they would be almost certain to come across the flowers. It is very remarkable in this connection that many of these species with showy foliage assume their brightest colors just about the blooming time of the plant.

In dwelling upon a question such as the one under consideration it is always a strange reflection, as to why it is that certain species seem to be more favored than others. To particularize in an instance, one may take the case of the *Salvia* referred to above. This plant has numerous allies some of which are scarcely so well favored in the attractiveness of their flowers as *S. horminum rubrum*. Yet these have not been able to blaze forth to the world with all the



Poinsettia Pulcherrima. A Flower Inconspicuous Because of Its Greenish Petals, But Attractive to Cross Fertilizing Insects Because of Its Bright Terminal Leaves

glory of gaily colored leaves and have to be content with ordinary green foliage. The problem is deep and far reaching, and one which it is far more easy to propound than to explain. It seems to be only half an explanation to say that one plant requires special assistance and the other does not. Probably the question could not be settled in one answer for it is likely that the reason is very different in individual cases.

The Question of the Fireplace

By John A. Gade



TO BUILD a fireplace correctly you must "know how." You will not stumble into success without some previous knowledge. As the "motif" of an opera or a single high-light of a picture may be the soul of the composition, so the fireplace and mantel are the keynote of the design of the room and its most important features.

A hundred years ago we bricked up the broad, generous chimneys of the earlier pre-revolutionary period, left a hole for a stove-pipe, and then enjoyed the novel luxury of the

tear or pile up the logs and kindling as the most expert fire-builder (and that is high art!)—its mellowing influence is the same.

In attempting to build a fireplace the first problems which face you are those of proportion, construction, and materials. The design of the fireplace itself, the opening, the linings, the facings, and the mantel, are naturally all vital considerations. The height and width and depth of the opening should all, if the fire is to draw well, be in certain proportions one to the other as well as to the lines of the throat and the area of the flue.

In fireplaces where the flues are expected to run three stories or more, the flue area at the top of the smoke chamber should be one-twelfth the area of the fireplace opening, if two stories, one-tenth, and single story one-eighth. These proportions will burn wood fires. In the case of hard coal fires, the flue areas may be reduced 30 per cent. (From this may be seen the difficulty of making the coal grate fireplaces of the old New York brown stone houses meet the requirements of the fireplaces transformed for burning wooden logs.) The total throat area should have one and one-half



1—Of the Best Louis XVI Design

stove. The age of grates and blowers followed, but these also quickly passed, leaving merely a recollection of their stinginess. They were never intended as a genuine source of heat, or drowsy, contemplative happiness. At their best they only "took the chill" off the room, and had to be supplemented by the register.

To-day, and especially in our country houses, we are once more realizing the artistic value of a good fireplace. What can compare to the comfort of the open hearth in your bedroom, when you return to it from your tub on a cold winter morning? Or in the evening, when you are tired after a day's hard work or exercise, what can come up to stretching your legs on the hearth, sitting with no other light than the glow of the logs and listening to the cheerful crackle and incessant sputter. An apathy and lazy contentment steals over you. Whether you poke the embers as the poorest ama-



2—In Harmony With Its Surrounding Panel-work

times the flue area. No open fireplace should be built without a backdraft shelf, so arranged that it extends far enough out to prevent rain coming down the chimney and rusting the iron work. A liberal smoke chamber and the backdraft shelf are essential. The front edge of the fireplace opening should be made as thin as possible. The depth of the fireplace should be at least one-half its width.

For the average bedroom, say for instance 14 x 18 x 10, or 2,500 cubic feet, a fireplace opening 3 feet wide, 2 feet 6 inches high, and 1 foot 8 inches deep will be found of good proportions. It should have a terra-cotta lined flue of about 100 square inches of inside area, or the flue known in the trade as an 8 x 12 inch. An excellent section for its throat is given in illustration 6. For the average bedroom fireplace the 8 x 12-inch flue is quite sufficient, for the larger openings of very generous rooms a 12 x 12-inch, while for the smaller needs of the laundry stove an 8 x 8-inch suffices. In the larger living rooms, in the dining-room, library, or above all in the living halls of country houses, one should attempt to procure openings slightly larger than 4 feet, or of dimensions 4 feet 2 inches by 3 feet 6 inches by 2 feet deep. A cord of wood is 4 feet wide and it is both pleasant as well as a saving in labor to be able to throw on the fire the whole unsplit or unsawn log.

The success or failure of a fireplace depends, at least to the average house owner, more upon its draft than upon its design. If it draws well it is a delight, if it constantly smokes it is a misery. The shape of the fireplace, the size and course of the flues, and the conditions surrounding the chimney all affect the draft.

I have already mentioned good proportions for the fireplace and flues. The course of the flues must, from the varying conditions of superposed stories and rooms, often become tortuous and intricate. A chimney stack often contains from four to eight flues each, each one from a different fireplace, no



3—French Mantel of Simple Restrained Outline

two of which have vertically superimposed masonry. The flues are obliged to dodge each other through the various floors, and yet at the end of their journey come out orderly side by side, above the roof. The extent and turns and twists a flue can take without refusing to draw is astonishing. I have seen a fireplace draw properly, whose flue, after rising to the ceiling, crossed the whole width, running practically

horizontally for twenty feet, and then just vertically, coming out of the roof the opposite side of the house from the fireplace. Generally speaking, however, a flue should not be slanted over 60 degrees. A slight slant to the flue is preferable to a perfectly vertical course when a down draft often affects the fire. The flues rising from fireplaces in lower stories than the one in question should, if coming on the sides



4—A Louis XV Mantel

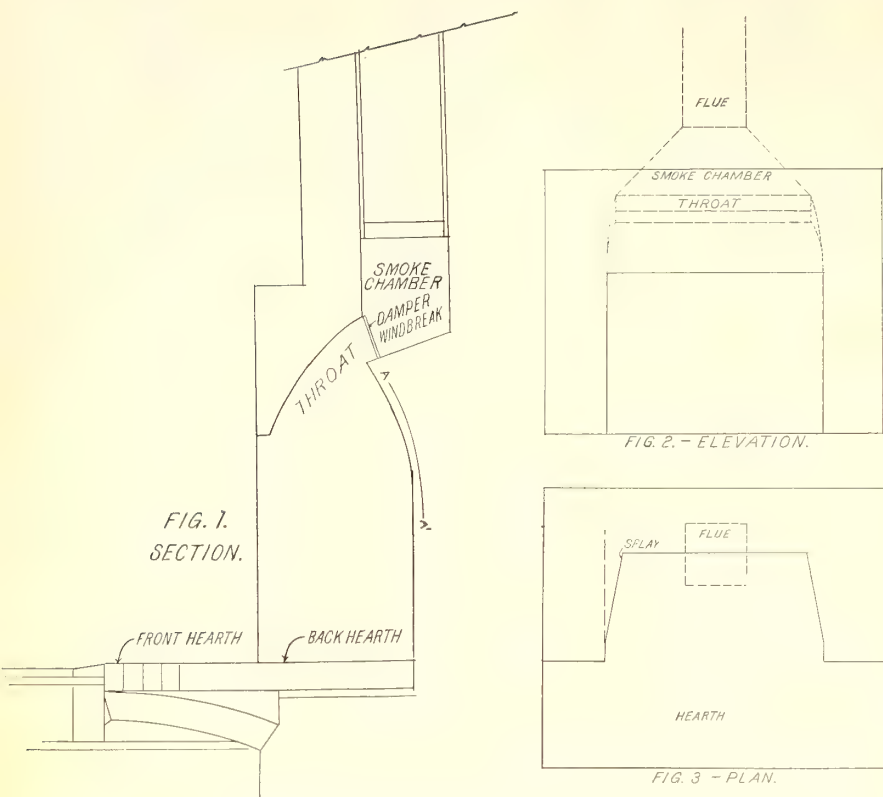
of our opening, always have four inches of brickwork between them and the fire, if behind our opening, eight.

Run the flues, to a reasonable extent, as far back in your wall as is possible. The broad projections of the chimney breast lessen the size of the room much more than one imagines. The bulky proportions of the huge chimneys of Cluny, St. Germain, and Blois were due to the fact that the builders ran their flues in front of their walls, not yet having learned to place them in chases and recesses. We, on the other hand, often go to the other extreme, and riddle our walls with so many flues that we seriously weaken the carrying strength of our masonry.

The exit of the chimney from the house should also have forethought. It should never be lower than the immediately surrounding roofs or gables, but preferably from three to four feet higher. It should never be adjacent to a high wall. In New York City one constantly sees the ridiculous instances where high apartment houses have been built beside the old low residences, whose chimneys on the apartment side will no longer draw. Long arms of tin pipe, twenty, thirty feet high, carry the mouths of the flues up and away from the overshadowing wall that choked their drafts. The high wall of the apartment had been acting as a windbreak, throwing the smoke of the fireplace right back in the room as soon as it rose.



5—An Example of the Elaboration of the Post Renaissance Period



6—Constructional Details of an Ideal Fireplace

It is a fallacy to believe that your chimney top needs covering, or your chimney smokes because it is unprotected. The more open and unobstructed the top of the flue, the better. A properly constructed flue and fireplace need neither cowl, cap, nor hood.

It is not practical to build fireplaces of the inglenook type. They are meant for tremendous, big halls. The design and heat are generally out of proportion to the chamber. In old English examples, as for instance in Bramall Hall, the enclosure was practically a small room in itself; you could seat yourself on benches, "inside the fire." The high and narrow openings of the Italian Renaissance period were likewise meant for chimneys having very different flues and construction from ours.

In building your fireplace the endeavor should rather be to construct it with the view of throwing the heat out into the room. You may easily have a huge fireplace opening and a splendid draft, but every bit of heat may be sucked up the chimney instead of radiated out into the chamber. Build the sides of the opening so that they open into the room, wider in front than behind. A splay of two inches to the foot on each side will be found satisfactory. More important is the building of the back. It should have a section, A-A', as in illustration 6. This will cause the heat to be thrown forward and out rather than upward.

The materials of your front hearth and back hearth, of your linings and facings, are many and varied. The back hearth and linings must always be of materials that resist the heat. A glazed tile should not be used for the rear hearth, as it certainly will "craze" or crack. The old fashioned soapstone, used in slabs from 1 inch to 1 1-2 inches, is excellent both for linings and rear hearth. It takes up very little room and if the slabs are carefully selected they should last from twenty to thirty years. Hard burned bricks, or the real firebrick, or Roman shaped bricks, laid in herring-bone or fancy patterns, are among the most serviceable linings and back hearths. For their use one naturally needs four inches of additional space all around the sides of the fireplace. Where economy of space is the great consideration, iron linings are imperative. Select, however, an "extra heavy" iron lining and see that the angles are tightly filled with

cement after they have been put together. The thin lining sold at the "ordinary," will often crack with the first bright fire.

The front hearth and facings, which are more ornamental than structural, should be considered in conjunction with the design of your mantel. Marble, stone, brick, tiles of all colors, sizes and designs are alternately used. The French scarcely use any other facing than an elaborately curved cast iron one, and in the English bedrooms one finds pretty invariably an ornamented tile. If a marble facing is used, the slab should be 7-8 inches thick. It should naturally, as also a tile, conform in color to the papering or wall covering. If you are uncertain when you are building your fireplace what you may later select for wall covering, a white, unglazed, "velvet" tile is always the safest, especially in bedrooms. If you select a stone facing, select preferably a limestone which resists the heat, and do not use it in blocks less than four inches thick. Even if you select a brick facing and build the bricks in an arch above your opening, do not trust to its supporting the masonry above. Carry this by a concealed iron lintel well bedded in the masonry on the sides. Provide your throats with dampers which can be closed when the fireplace is not in use. Project your hearth at least 16 inches into the room and far enough on each side of the opening to catch stray sparks.

Unless you know precisely what you want, selecting the mantel itself becomes almost as difficult as choosing a wife. Certain rules should govern every one in its design and selection. If the mantel is to be of wood, it should be similar to



7—A Hooded Renaissance Fireplace

the remainder of the trim of the room; it should further be in scale with the room, of good proportions and ornamentation. Papier maché ornaments will in nine out of ten instances, where the mantel is to be painted, serve your purpose. If you are not limited by the cost, carve your decorations.

And now as to style. There is no part of our house in which every period of architectural design is more frequently utilized, helter-skelter. What would look most suitable in the average bedroom of our unpretentious country house would be a plain wooden frame of a hard wood, well-seasoned, so as neither to crack, shrink, or warp. After being well filled it should, if the remainder of the room is painted, receive four or, even better, five coats of paint. On top of the frame place a shelf supported and connected by a sufficient bedmold to the moldings below. Project it from eight to twelve inches from the wall. Make your facing of equal dimensions on the top as on the sides. A great portion of the simpler ready made mantels derive their stilted appearance from the fact that the facing above the opening is much too large in proportion to the facings of the sides.

If you are uncertain as to the style of your mantel, in a room of a decided architectural period, you can do no better

Both of the French mantels are, however, in strict conformity with the surrounding decorations designed and studied in connection with the mirrors and panels surrounding them. In illustration No. 5, the mantel has become a regular monument in its room, as striking as a monumental sepulchral composition on the bare walls of a chapel. It is modeled after earlier periods marked by the importance or clumsiness given to their design. The great bulk of masonry takes one back to the French castles of the fourteenth and fifteenth centuries, where groups of guards would warm themselves around the logs at each end of the great hall. It does not show the careful study and treatment, for instance, of the early French Renaissance mantels of the Chateau de Cadillac. For successful French treatment, merely from a point of view of monumental mantel design, we must, however, search in the later periods of Louis XIV and Louis XV, when such men as David Marot, Berain, etc., were executing their conscien-



8—A Good Copy of an Old English Type



9—Of Colonial Type, but Slightly Mongrel

than also conscientiously to carry out your mantel in the style of the room. Nothing could have looked as charming or in better keeping with the room in illustration No. 1 as its Louis XVI mantel. It is absolutely historically correct, probably a copy of an old one of the best design of the period. It has the low mantel shelf, in Louis XVI work, seldom above 4 feet 3 inches, the broad ornamented frieze, with neither classical architrave nor cornice molds, the curved iron facings, and wide opening. Illustration No. 2 gives another mantel of the same period. They are both simple and restrained, especially in comparison with the immediately preceding style of Louis XV, illustration No. 4. Here the treatment is generally artificially unrestrained, again characteristic of the decoration of its time. There is hardly a straight outline of an unbroken surface. The moldings and angles are broken by shells and conventionalized scrollwork. The linings and facings are of cast iron with elaborate figures.

tious work. In illustration No. 7, we have a good type of the hooded Renaissance mantel.

For our common, every day household needs, we must, I believe, go to another period of architecture to procure mantels in harmony with the surroundings of our daily life. In England we find the greater portion of their prototypes. Mantels similar to those in Wilton House, Knousley Hall, Belton House, etc., are the direct historic predecessors of some of our best Colonial ones. Even in the great residences similar to Hampton Court Palace or Holmes Lacy, Hereford, if we omit the carvings of the overmantels and thereby observe the simple, restrained proportions of Inigo Jones' work, we find numberless variations of the forms and general proportions we are to-day fittingly employing. We can rob the whole fireplace and mantel from the old English living and dining-rooms (illustration No. 8) and set them up in our own country house and they will look almost as much at home

in their new surroundings as they did in the original ones for which they were designed and built. A great many of our finer Colonial ones in Virginia and Pennsylvania were, together with the other decorations of the American gentleman's country seat, as well as the bricks themselves, brought directly from English houses or makers. They are unpretentious, well-proportioned, and inexpensive. Almost any mill or cabinet-maker can execute them. All the larger salesrooms or dealers in mantels have hundreds of comparatively excellent copies of mantels originally executed for English Georgian or our own Colonial houses of the next generation (illustration No. 9). Our Colonial ones were, out of economy, almost always executed in wood.

Only one additional feature of the fireplace is worth noticing, and that is its great value as a ventilator. It creates a steady current in the chamber and draws out the exhausted air. To be truly hygienic, the chimney should be fed by exterior fresh air



10—Of Excellent Georgian Form

inlets. Fed by these, it really becomes a ventilator, a hot air mouth, which constantly replaces the air of the room by heated fresh air.

A True Country Home

By Edward Watts



DO not intend to write of a costly country place, where people of wealth may resort; but a model home for an energetic, intelligent family, willing to study nature and put their knowledge to practical use. A well-located residence of twenty acres, or even ten, where the conditions are not unusually unfavorable, can be made to pay its own way, and yet take into its makeup nearly all the charms of landscape beauty. The homestead that I shall describe was not unusually fertile, but its position on the western slope of a superb valley, overlooking a dozen villages and a city, with garden-like scenery in all directions, could not be easily surpassed. Yet our country holds many such places; noble in outlook, where homes like the one that I shall describe may be easily planted and sustained. I never travel through New England, and the same is true of the Western States, and still more of the Southern, without saying again and again, "There, what a noble place for a home! What a winsome location for a house!" It only needs an educated will and a resolution to study Nature and be instructed by her. Those who go out to spend money I am not concerned with; but the man of moderate means, who has a taste for the beautiful, and is willing to adjust himself to new conditions.

The old homestead of my boyhood occupied the very heart of a western slope, overlooking the Oriskany valley, where it runs down through the center of the Empire State. On a broad rise in the middle of the valley lay the village of Clin-

ton. Its roads, bordered with trees, felt their way in all directions through the hills, awaiting for steam-cars and trolleys. It was the first village created by New Englanders on their way Westward to conquer a continent. I do not wonder that on that knoll the pioneers from Connecticut first planted a home. My own venture was to be on the very spot where Dominie Kirkland, with his friend Sconodoah, planted the first pioneers' orchard in 1791. Most of the great trees were still standing, and the old farmhouse, built when the trees were planted, was still capable of occupancy.

From the orchard, along the southeast slope, toward the street, was a succession of knolls and swales. Following these upward, till they came to a level sward, I found not only my natural driveways, but an inviting position for my house. Here could be secured the most perfect drainage, and a commanding position. This location, it may be observed, was not the conventional one near the roadside. It was selected by Nature herself, as on the whole the best spot for a house that should command the whole property. It was as convenient for the rear as for the front. Drainage from this point was perfect, and the outlook took in not only the property itself, but the whole valley.

The construction of the house was to follow the nature of its location. Having command of a wide outlook and of many beautiful points, it must not be so constructed as to shut these out. In other words, a building was to be erected exactly adapted to the spot where it stood; a building that would not so well fit any other place. It was to be simple

in structure, but ample; and to let in just as much of outdoors as possible. It was, in fact, a sort of outdoors house that we proposed to build. And this was what we did build. A true country house should not have any back side to it, but should be equally attractive on all sides; for this reason you would hardly recognize any one side of this homestead as the front.

The gardens that we planted were first of all to supply a large and adequate supply of crops for home use. If in time a surplus occurred, we intended to find a market. In reality a surplus did occur about three years from planting. It began with the strawberry crop, soon extended to the raspberries; then to the cherries and plums, and finally took in pears and apples. In planting a country-home garden, it is well to begin with a rather free planting of the raspberry. As this berry can not be shipped to a distance, it can hold the home market. We have found the currant also to be a very good home-market fruit. There is never a glut in sour cherries, and it is advisable to add to these only strawberries enough to supply nearby customers. This rule does not apply where one is in possession of property peculiarly adapted to this berry; that is, low-lying land, easily irrigated. Our gardens were for experiment as well as cropping; and such experiments have been carried on from the beginning. Among the results are a currant standing seven feet high, and bearing fruit equal to Fay; that is, a bush one-third larger than any of the best varieties. Another currant of fine quality holds its fruit until November. Other products are too numerous to be specified in this place.

In order that experimental work might be more successful, a laboratory was built, as well as a shop, in connection with the barn. Home education naturally became a part of the program. Botany, geology, ornithology, and particularly entomology, are essential parts of farm-life. Where tutors can be obtained education may be almost entirely without the aid of public schools. This, however, is the exception. At all events let these home sciences find their place. Otherwise a country home is not either appreciated or comprehended. A knowledge of insects, bees, and birds is quite as essential as a knowledge of cows and horses. Our country-home makers must be waked up to comprehend this fact.

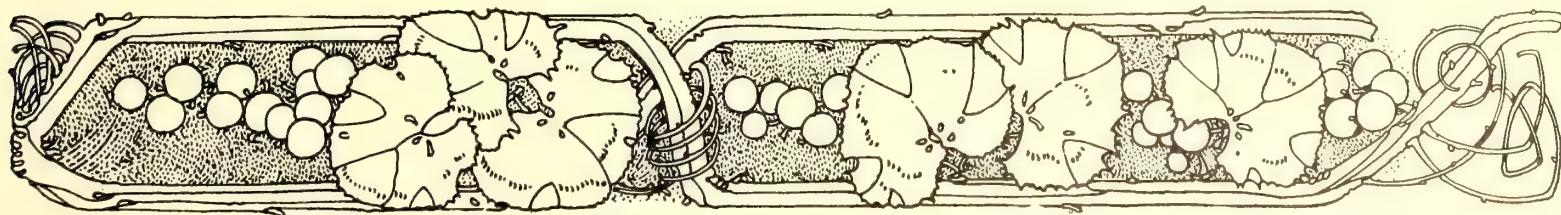
The orchard I have mentioned as including some very old trees. But these had begun to pass away, and must be steadily replaced. We have at present over eighty varieties of apples yielding three hundred and fifty barrels a year. This does not include the drops which go to cider. The shop holds, when needed, a small cider-press, capable of making a fine item of income out of what would otherwise be largely waste. A country home should arrange its orchard-trees so that there should be a complete succession of apples through the whole year. We begin with Yellow Transparent in July, and end up with Pippins and Russets in June—leaving scarcely a gap without apples. The same is true of pears; the Rostiezer opening the year in July, and Patrick Barry closing it about the first of June.

Flowers for a country home ought to be those most easily cultivated, and those not making too much winter care for protection. I recommend above everything else a good-sized shrubbery. This can completely surround the house,

provided the house be far back from the street; or it can flank it—preferably to the east. Such a shrubbery would make a specialty of native sorts, and provide itself liberally with lilacs, syringas, and other varieties of shrubs bearing sweet flowers. It is worth a good deal to a house to have the gentle summer breezes waft in a plenty of ozone. But at the present time any country home can, at small cost, provide itself with blossoming shrubs through the whole season. Of course, a rose garden is a necessity. It should be located where it can be cultivated with a plow. It must be manured heavily, and can be provided with varieties that will not need much winter protection. I have not found any flower more satisfactory for a country home than the tulip. These multiply very rapidly. I have them pushed into the strawberry rows, where they blossom by the acre; the flowers being gone, and even the stalks, before we begin picking the berries. Gorgeous lilies, including madonna and lancifolium, may be had by the thousand without much labor. The gladiolus makes another good plant, as the bulbs can be set in where there is but little space to spare. But be careful about trying too many annuals and biennials that must be grown from seed.

We occupy nine acres and of these nearly one-half is devoted mainly to tree lawns, shrubberies, and flowers. In these lawns there are, however, some fruit trees. We sell of strawberries less than fifty dollars a year; of currants about two hundred dollars' worth; from red raspberries and a few black ones we take over three hundred dollars per year; from blackberries about two hundred dollars. Cherries and plums will net a surplus of one hundred, possibly one hundred and fifty. Having reduced our pear orchard by sale of land, the surplus for market will not exceed seventy-five dollars. From bees we secure about five hundred pounds per year; of this we sell three hundred pounds, at the maximum. The item for eggs, broilers, etc., will not exceed fifty dollars. The surplus sale of apples, including cider and vinegar, reaches about four hundred dollars, and is constantly increasing. This is a maximum statement, and must be taken with this consideration, that every year notes that failure, or partial failure, of two or three crops. In other words we average a sale, beyond all that we eat, of about twelve hundred dollars. That is to say that we have a beautiful country home; and it pays. The expenses of such a home, of course, vary according to the family and its habits.

I have not hesitated to use my own experience by way of evidence. Such a place as described can not be recommended as possible for those who will not be alert, and whose education has come short of educating the will; much less can it be recommended to any one who wishes simply to be fed by nature, without attentive labor. Such a spot excludes all thought of rental and tenancy; conferring upon itself that glorious title "home"—a permanent abiding-place, where the soul may grow and twine its tentacles about every tree, and a thought about every growth. The drift countryward is now met by the trolley, the rural free mail-delivery and the telephone. These give to the farmer all the advantages of city life and something over. We shall probably see all of our hills covered with such happy homes, and a suburbanism covering the whole land.



Preserving the Eggs

By A. S. Atkinson



WE TOOK to poultry-raising like a duck to water when we secured possession of our suburban home. There was only an acre of land around the house, which had to serve as a flower-garden, orchard, kitchen-garden, and poultry-yard. But our ideas of poultry were somewhat exalted. We had no love for the common barn-yard birds. We chose the aristocrats of the flock—fancy poultry, if you please.

They came high at first, and a little later they proved dear investments, for half of them died the first year and most of the fancy eggs which we purchased failed to hatch. We secured more eggs, with guarantees attached to them, and restocked with more choice old birds. Experience had taught us how to avoid some of the common mistakes of beginners, and we had less sickness and anxiety of mind.

But after two years of such work we gradually drifted back to the common idea. Fancy poultry are fine for show, but after all good, fresh eggs count more. So we slowly replaced our expensive birds with good layers. We soon had a colony that furnished us with all the eggs we could use, and in time a surplus accumulated in summer.

We had the experience so common among most suburbanites who like to raise their own fresh eggs. There was always a surplus in summer and a dearth of eggs in winter. We had to sell or give away part of the summer eggs and go into the market in winter to purchase fresh (or more often cold-storage eggs) at double the prices we sold fresh eggs for in summer. This didn't seem right. There should be some way to remedy such a deplorable state of affairs.

Why not preserve the eggs? Nearly everything is preserved for winter consumption, and why not eggs? Well, we inquired into the question, and found that cold-storage eggs were kept from three to six months, but to do this one required an extensive and costly plant. Limed eggs were not enjoyed by any of us, and refrigerator eggs generally spoilt on account of the excess of moisture.

Our convictions were sufficiently strong to lead us to experimenting. Possibly there was a way to preserve eggs which all the philosophers and men of science in the past had failed to discover. We tried some of the time-honored methods which have been handed down from generations past, and ventured into new fields of our own. Painting the eggs with various oils and paraffin mixtures yielded some good results. Some of these methods consisted of coating the eggs with salicylic acid and cotton-seed oil with and without alcohol, paraffin, collodium, and gum arabic. Fairly good results were obtained with eggs treated in this way, but they did not prove satisfactory for any great length of time.

The lime solution we next tried consisted of lime and salt, with a little borax and sodium bicarbonate. The eggs were kept in good condition upward of several months in this solution, but the shells were discolored and they did not present a fine outside. They could not have been sold in the market except as limed eggs. Their method of preservation was too apparent. They had, after six weeks, a slight musty taint, which increased every month until they were not good for much except cooking, where the musty odor would be disguised by the other ingredients.

Various salicylic-acid solutions were tried, but in nearly every case the acid weakened the shells, and when kept too long some of the shells broke and the acid got inside, com-

pletely spoiling the eggs. We used about one ounce of this acid to each gallon of water, and a stronger solution increased the injury to the shells.

After all these experiments we were induced to try water-glass, liquid glass, or silicate of soda. Under these various names water-glass is sold at druggists' for egg-preservation. The material is perfectly harmless, and it preserves the eggs longer and more satisfactorily than any other substance. In the last year or two it has been used extensively throughout the country for preserving eggs, but at the time of our experiment it was not a popular or generally known preservative.

We first used a ten-per-cent. solution of water-glass; that is, one part by measure of water-glass to ten parts of water. The water should be boiled and cooled before the water-glass is mixed with it. The water-glass if good should be about as thick as mucilage, and when mixed with the water the barrel containing the mixture should be kept in a cool, dark place. Sometimes in hot weather the water-glass shows a tendency to separate from the water, but if the barrel is kept in the cellar or other cool place little trouble will be experienced.

With the water-glass solution June eggs were kept until December, and with but few exceptions they were in good condition when used. Here and there one was found which had the whites coagulated. A few would sink to the bottom when placed in water. But none of them were actually spoilt or so musty as to be useless. In fact, some of the eggs used six months after storing were so fresh in taste, odor, and appearance that I believe they would have passed as fresh eggs in the market. It was apparent that some of the eggs did not keep so well because of improper coating of the water-glass solution. We made another trial with a twenty-per-cent. solution of water-glass, reasoning that if a weak solution would do so well a strong one would accomplish much more. But in this we were mistaken. The stronger solution gave no better results, and in some respects we thought it not quite so good. An eight-per-cent. and later a fifteen-per-cent. mixture were tried, but with such poor results that we decided that the ten-per-cent. strength was about right.

We found upon inquiring for water-glass that a number of druggists had never heard of it, but when we asked for silicate of soda there was no trouble to secure all we needed. When a barrel of the solution is made and placed in the cellar or other cool place, the fresh eggs are simply dropped into the liquid from day to day as they are gathered. The eggs should be kept covered with the solution, usually an inch or two giving the best results. If the eggs increase in numbers, the liquid must be increased, if there is any danger of the former being exposed to the air. Air is fatal to the preservation of fresh eggs, and they should never be taken from the barrel an instant except when ready for using.

If it is desirable to sell the eggs in the market they can be removed from the barrel and rinsed off with fresh water. The solution immediately leaves the shell, and the eggs will pass for fresh eggs. The water-glass seals the egg-shells airtight, and this is the simple reason for the success of the plan. Where the eggs are to be kept a great while, they can be taken out of the old solution and placed carefully in a new barrel. This repacking enables one to get at the lower layers, which naturally are the oldest eggs. Eggs six months old may not sell as well as strictly fresh ones, but for home use they are just as good.

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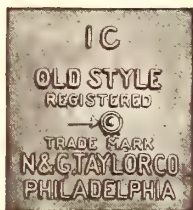
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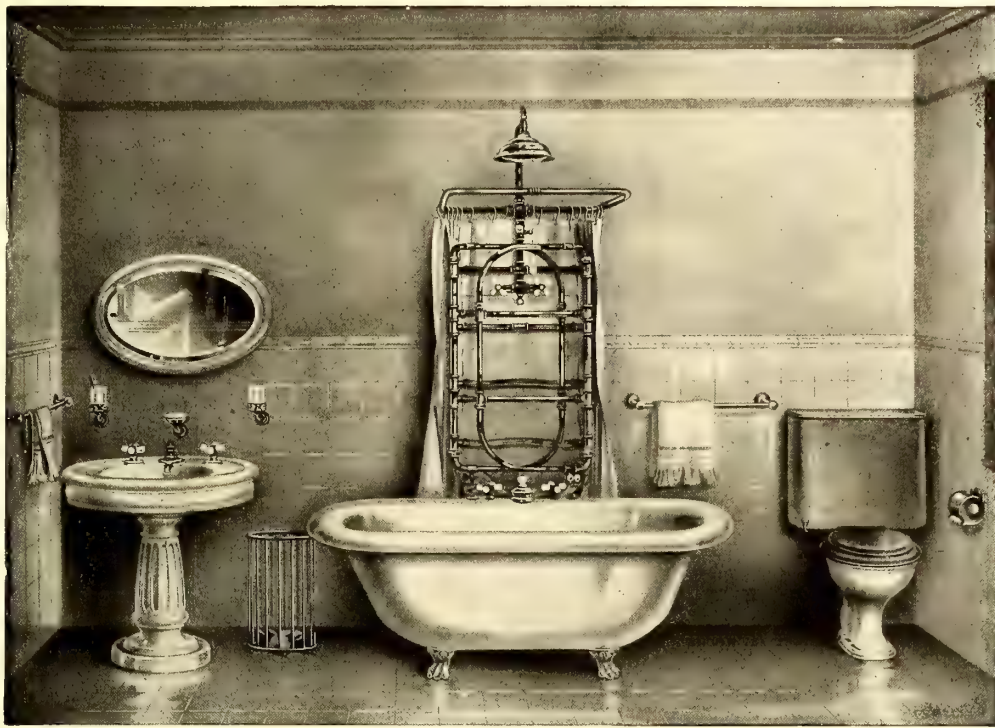
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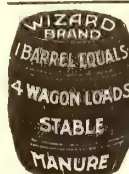
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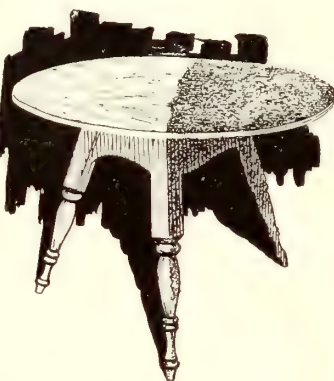
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JANUARY WORK

A Chapter of Seasonable Suggestions

LOOK over the cannas, caladiums, and dahlias, to make sure they are keeping well in the cellar. If any decaying roots are found, throw them out, at once, before they contaminate others. If any are moldy, you may take it as an indication that their present quarters are too damp for them. Either remove them to a dryer room, or spread them out on shelves, near the ceiling. It is often necessary to take tubers out of the cellar at this season, because of the great amount of moisture there given off from vegetables.

If any plants are stored there, in pots, it will be well to examine them, to make sure they are not getting entirely dry at the roots. It is not expected that the soil will get rid of all its moisture. Aim to keep it slightly damp, but not enough so to encourage growth.

Underground cellars ought to be done away with. They are relics of a dark age. More sickness originates in them, physicians claim, than anywhere else about the place. They can not be kept in sanitary condition while vegetables are constantly decaying there. The place for a cellar is above ground, and outside the dwelling. Leave the basement for the furnace, the coal-bin, and a general storeroom. An above-ground cellar is more convenient, in every way. Your vegetables can be stored with less than half the labor, when you do not have to go up and down stairs with them. You can keep an above-ground cellar clean with but little trouble, while the underground one, being difficult to get at, will be neglected, nine times out of ten, and allowed to become a source of infection to the family above it. I hope the owners of homes in the country will put some earnest thought on this matter, and decide to build an above-ground cellar the coming spring. Ventilation and temperature are much more controllable in such a building than in the old-fashioned under-ground cellar, which obliges the housewife to use up so much strength in climbing stairs. Locate it convenient to the kitchen, with which it can be connected, in winter, by an enclosed passageway.

Now is a good time to go over the garden tools, and see that they are put in shape for use when spring comes. Make whatever repairs are necessary. Give all metal parts a wash of oil to prevent rust. Paint the woodwork. Care for these utensils properly, and they will last three times as long as those which are given no attention.

There ought to be a workshop connected with every home which has a garden. The barn is a good place for it, if there is no other building available. Fit it up with a stove, provide saw, hammer, planes, and such other tools as will be likely to come in play in the work that must be done, and tell the boys of the family to learn how to use them. I believe in teaching boys how to work while they are boys. Give them encouragement and praise when they do things well, and let them feel that you have so much confidence in them that you are not afraid to put little responsibilities on their shoulders.

Now is the time to get hotbed and cold-frame materials ready for use a month or two later. If those who have never had a hotbed would arrange one this season, they would never be without one again. We can have lettuce, radishes, and spinach weeks earlier from the hotbed than we can from the garden, and many kinds of vegetables can be given an early start that will enable us to secure results at least a month sooner than we could hope to if we were to depend entirely upon the garden for them. Hotbeds are easily made, and a little intelligent care is all that is

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Turn the plants in the window at least once a week, to prevent them from becoming one-sided and unsymmetrical by being drawn to the light. It is a good plan to give the taller plants the sides of the window, reserving the center of it for the low-growing ones which would get but little sunshine if we placed the taller ones in front. Shade-loving kinds can be given places in the rear of the tall ones, where they will get all the light they need.

Give the callas plenty of water, and warmth. Fertilize well, to secure a strong growth. You can not get large flowers or many of them, from plants that are not luxuriant and vigorous. It is almost impossible to overfeed them.

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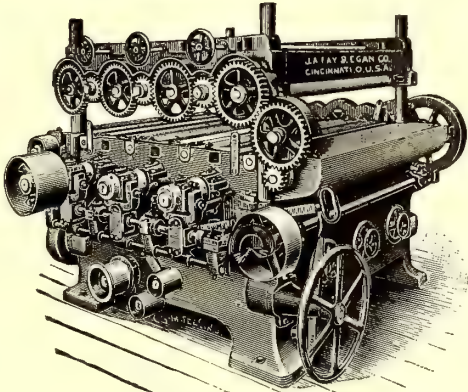
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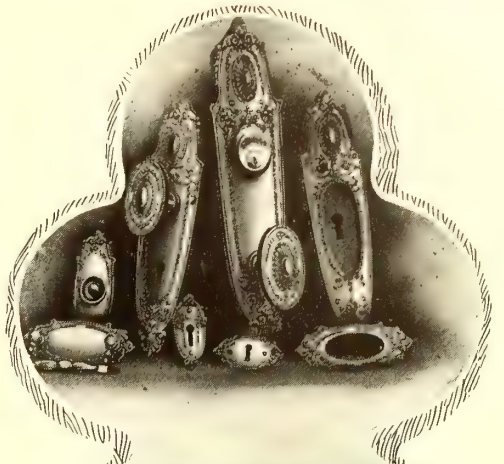
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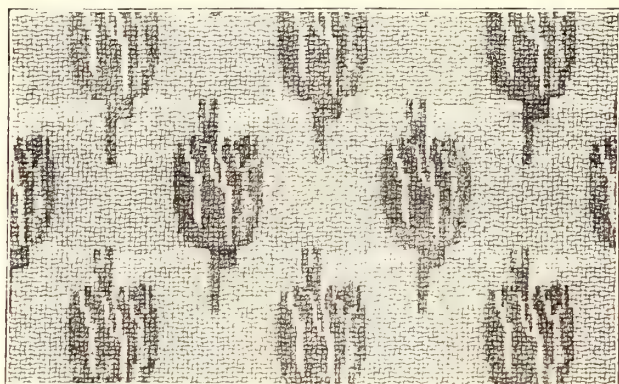
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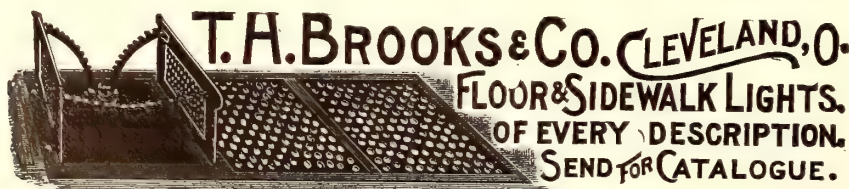
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By George Ethelbert Walsh

MOST of our domesticated birds and animals are of foreign descent, and their ancestors can be traced back to Old World patriarchs in existence before America was discovered; but the turkey is a distinct American product and closely associated with one of our most important holidays. The domestication of the wild turkey has preserved an important species to us, for in his native habitat this creature is rapidly becoming a rarity, and in due course he will disappear from the woods and swamps of the country as completely as the bison has vanished from our western plains. The wild turkey of North America is the largest of the several breeds, and it is beautifully colored, with a rich mingling of black and bronze. In the early days of the country's settlement, the wild turkey of North America was pretty generally distributed throughout the eastern, western and northern States as far north as Canada.

In many of the southern States the Mexican wild turkey is found roaming in considerable numbers, and it is distinguished from its northern companions by lighter colored plumage, shorter legs, and somewhat smaller body. The Honduras or Central American variety is another of the three original varieties of wild turkeys found in the two Americas. It is the most gorgeous in appearance of them all, its plumage being brightened with bands of bronze, blue, red, and black. In the tropical forests of Central and South America they are found to-day, and are considered rich trophies of the hunt. They have never been successfully cross-bred with our other standard breeds, nor have they been domesticated profitably.

Few who breed turkeys on their estate or country range stop to consider their origin. Of the half dozen or more standard varieties of turkeys bred for the table and exhibitions, the Bronze is probably the most popular. This variety is a cross between our wild northern turkey and the domesticated Black turkey. The Narragansett variety is the favorite with many other breeders, and it owes its rich plumage to crossing with the Mexican wild turkey and some of our domesticated kinds.

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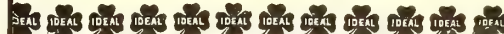
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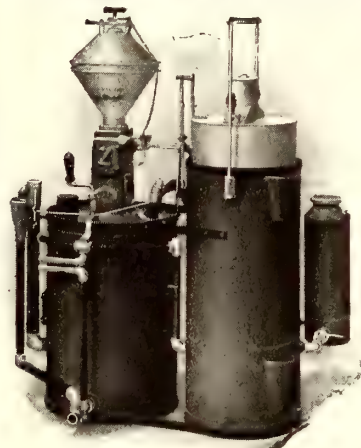
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males, and the Narragansett is only a little smaller. The Black turkey has been of great breeding value because of the results obtained in crossing it with the wild turkey, and more recently by interbreeding with the Bronze. Its size is smaller than either of the other two popular varieties, but good breeding and selection have steadily increased the bird's weight until it stands high among the popular breeds. The White, or the White Holland, turkey has grown into popularity among the Rhode Island breeders, and many of them devote their time exclusively to raising them. The White turkey was probably originally a sport or albino from other varieties, but through careful breeding and selection the type has been permanently established. The Whites have been crossed with the Bronze, Blacks, and Narragansetts.

There are Buff and Slate turkeys named among the standard varieties, but neither of these is very popular. They are never seen at exhibitions, for they are not true to color. They are found on many farms and ranges, but their colorings are always mixed. A true slate or buff is a novelty among them. They are rather diminutive in size, and very wild in their tendencies. The Bourbon Reds is a variety which has received some special attention from breeders in recent years, and they have been bred until many of them are as large and heavy as the Bronze. They have white wings and cinnamon-colored bodies.

Turkeys for the country estate and small home with a few acres surrounding it are popular birds, for they combine the useful with the ornamental. They are best adapted to places with plenty of woodland and meadow range, where they can roam undisturbed during their breeding and growing age. If given a fair range, the turkeys will not stray beyond it, but if confined in restricted quarters they will steal away whenever possible to fields beyond. A woodland range of half a dozen or more acres furnishes an ideal home for turkeys, and they thrive in such places so well that ordinary diseases and epidemics that attack confined birds rarely decimate their numbers.

Turkey breeding on the country home should be sharply defined from the wholesale raising and fattening of turkeys on the western ranch and "turkey foundry" where market utility alone is considered. The mixed variety of "barn-yard" and "ranch turkey" found on these large western ranges is anything but attractive to the lover of fine birds, and the toughness of their meat when finally brought to our Thanksgiving table is little more appealing to our esthetic tastes than their appearance.

The high-bred turkeys of the private estate or modern country home are products of skilled breeding and intelligent selection. They give pleasure as well as profit, and prove of value to the grass fields, the low woodlands, and the meadows. They still possess the roaming tendencies of their ancestors to a degree, and they prefer nothing to searching for their dinner in the meadows and woods. They devour bugs and worms by the thousands, for to them the ordinary noxious insect is a dainty morsel for consumption.

The Bronze turkeys are the greatest roamers of the whole tribe, with the Whites and Blacks the least inclined to stray away of any of the breeds. The former should have at least twenty acres for a range, and the latter may be raised with fair success on ten acres. A small place of four or five acres offers few inducements to turkey-raising except for pleasure and exhibition purposes. Some of our best exhibition birds, however, have come from country places of a few acres in extent where the owners made up for the lack of room by greater attention to their individual needs. The spoon-bred and chestnut-fattened turkeys

of our small Rhode Island farms are something more than a myth. They are in reality dainty luxuries produced by the loving kindness of genuine bird lovers. Like all other birds and animals, the meat of the turkey is made by the food on which it lives, and if fed only coarse, putrid meat-scrap its flesh can not be other than tainted when brought to our table. The finest meat in the world often comes from the wild turkeys of the Southwest where they roam through the swamps and woods, feeding on toothsome chestnuts, butternuts, and acorns. Their meat has the delicious gamy flavor which we all prize so highly.

While the attention of most of us is turned turkey-ward about Thanksgiving time, the breeder must always have the birds with him, and through winter and summer he provides and cares for them. The laying time of the Turkey hens begins late in March or the first of April, and at this season from 16 to 30 eggs will be laid for hatching. This is the time of the year when the owner needs to go nest hunting. Unless he can offer special inducements to the turkeys, they will go roaming afar for a nesting place, and after securely hiding it from all human eyes they will hatch and rear their young in secrecy. And nothing is wilder than a flock of young turkeys raised in a stolen nest in some distant hedge or woodland thicket! It takes the better part of a year, and the full quota of a man's patience, to tame the creatures even approximately to that of the ordinary domesticated fowl. One may, indeed, organize a "wild turkey hunt" on his own estate if he leaves the birds reared in secrecy to their own ways and resources.

For success with turkeys not more than five or six hens should be allowed to each tom, and these should be separated from all other flocks or colonies during the mating season. Two-year-old hens mated with one or two-year-old toms make the best unions, and the young are more apt to be strong and vigorous from such parents than from older birds. Everything depends upon the start the young turkeys get at their birth, and ancestral traits and propensities are directly transmitted from one generation to another. With the proper selection of good breeds, and the mating of individuals of the highest grade, the future of the young turkeys is assured if fair care and protection are accorded them. Close inbreeding is to be avoided, for this will destroy the flock quicker and more surely than anything. This can be avoided by securing new toms from distant points—a thousand miles away if there is any danger of inbreeding. To keep up the grade of the flocks, it is essential that the choicest young hens be selected each year and kept for future breeding. The practice of selling the best each season is destructive to all successful breeding, and yet many make this thoughtless mistake and wonder why the strain runs out and the birds steadily degenerate.

When the mating season approaches the young hens selected for breeding should be separated from the rest of the flocks and by persistent feeding and attention they can be induced to nest near their feeding quarters. An old barrel turned on its side and filled with good clean hay and straw; a large dry-goods box with one end opened, or a nesting box built in a clump of bushes near the feeding place, will answer for nesting material. Coaxing and careful attention will induce the hens to lay their eggs in one of the places chosen for them, and as half the battle is won by keeping the hens at home at this critical time it is well worth while to make every effort to win the confidence of the prospective mothers.

When the young turkey poults appear feed them with stale bread soaked in sweet milk. After soaking press the bread in the hands until the milk is squeezed from it, and then



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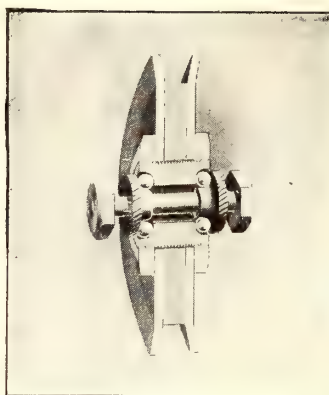
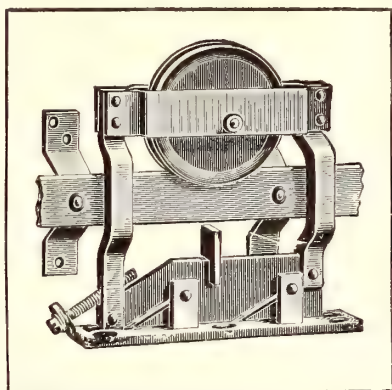
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hold small portions of the food close to the bills of the young ones. A careful breeder will coax the poults to eat out of the hands by peeping gently to them in imitation of the mother's call. In a short time the poults will eat the bread eagerly and further feeding is made simple. Sour bread or tainted milk must be carefully avoided. There are many prepared foods on the market for turkey poults, but one may secure just as good results by using bread and sweet milk.

As soon as the poults have learned to eat a little out of the hand spread the food on a dry board near where the turkey hen can teach them to pick it up. In two or three days dry bread crumbs instead of moistened bread should be fed them, and a day or two later add small broken oats and cracked corn. The latter must be very fine or else strangulation may result. As they grow older the poults should have a more liberal variety of grain, and the cracked pieces may be larger.

Meanwhile, the hen must not be neglected. She must be fed liberally with mixed grains and other foods she is accustomed to. For the first few days this should be given to her so that the young poults can not reach it and run the risk of choking. The mother hen should not be confined, but should be given the privilege of roaming around every day to pick up worms and bugs. When a week old the poults can be turned loose a short time each day with the mother for exercise, but care must be exercised to see that they are not tired out. They must be separated from the mother, or the latter cooped up, for a part of the time until the poults are at least a month old. Usually when five or six weeks old the poults are strong enough to roam continually with the mother. The range at first should be limited, but as the turkeys grow in size and strength larger fields for roaming should be opened to them.

There should be no mistake about the cleanliness and sanitary conditions of the nesting place, yard, and shelter for the turkeys. Next to inbreeding, turkey lice destroy more young poults than any other thing, and filth, foul odors, and dampness follow close upon the heels of both as agents for increasing the mortality of turkeys. Poultry lice can be prevented by keeping all roosting, nesting and other places scrupulously clean. Whitewash the inside of the shelters as often as they need it, and clean house every day or two. If any building becomes infected shut it off from the turkeys, and sprinkle it thoroughly with diluted carbolic, and then whitewash a few days later. Do not let the turkeys return until every evidence of vermin has been removed. Filth and foul odors can be prevented by simply keeping the houses clean. As one sweeps and scrubs his own living-quarters, so should the houses designed for the choice turkeys be cleaned.

A good many successful turkey breeders do not provide much shelter for their turkeys. Their contention is that the birds are much better when forced to live and roost out of doors; but this should be accepted with a good deal of reservation. While turkeys may be wintered successfully in the southern States without much shelter, they can hardly do so well in the North without good winter quarters where they are protected from cold and stormy weather. What they may gain in hardiness of constitution, they will lose in fat and plumpness. In other words, to secure choice-meated turkeys they must be provided with quarters in winter that will make life pleasant and accommodating to them. The danger of such houses is that the owner is apt to neglect their sanitary arrangements, and thus permit filth and disease to creep in. Dampness in particular must be avoided, for this is fatal to the young poults. By building

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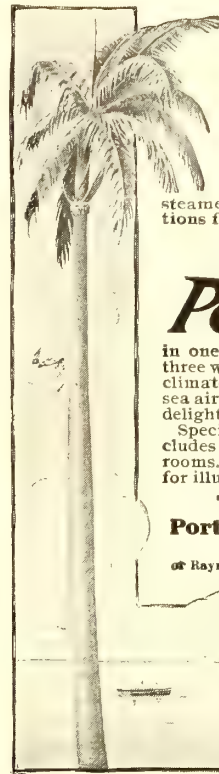
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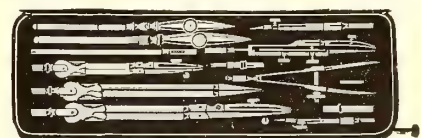
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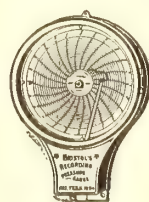
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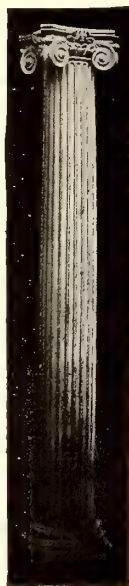
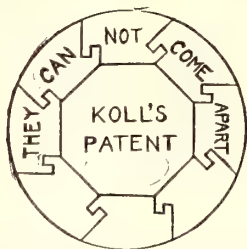
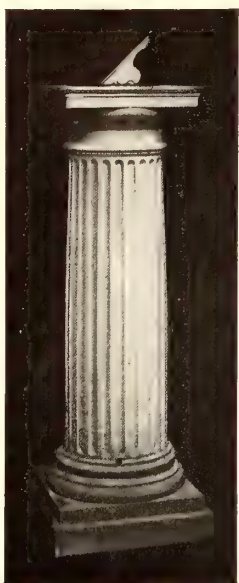
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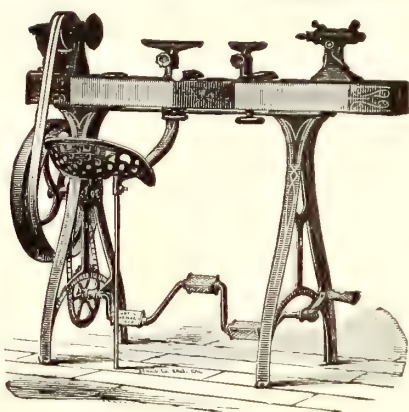
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But as the temptation of Thanksgiving regularly draws one to the turkey-yard, it is well to hold in check the desire to sacrifice the choicest hens of the flock for the table. Pass them over and take the second best. Otherwise the deterioration of the flock causes regrets that only years can obliterate. Keep the choicest for next spring's mating, and each successive year the quality of the turkeys will improve until the grade becomes standard, not only in looks and appearance but in practical utility. It is the one repression of desires that makes this national feast a true reminder of the qualities of our stern, self-contained Puritan forefathers.



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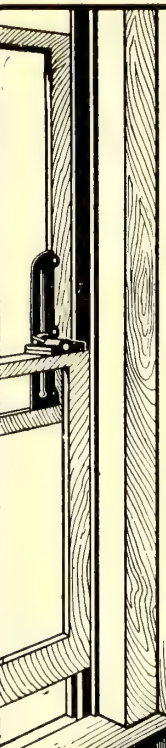
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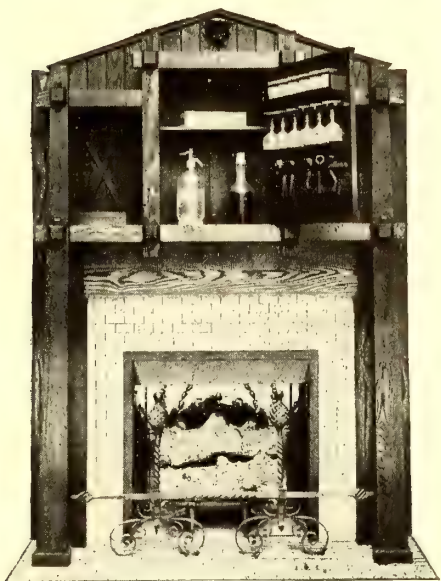
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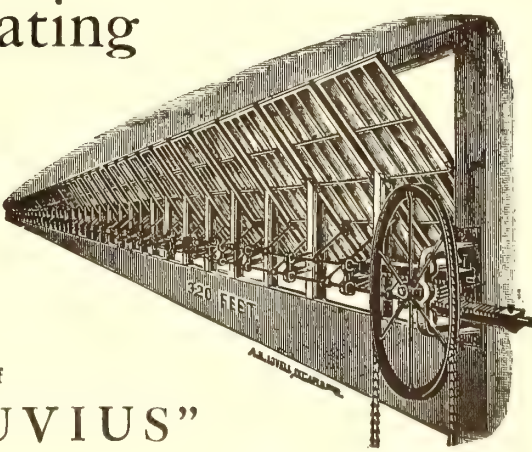
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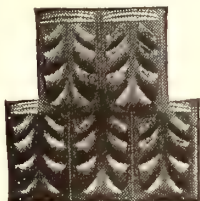
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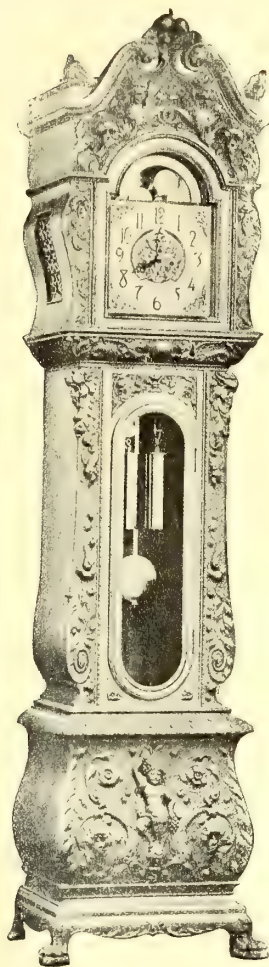
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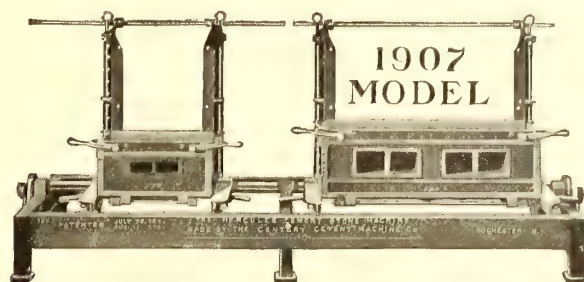
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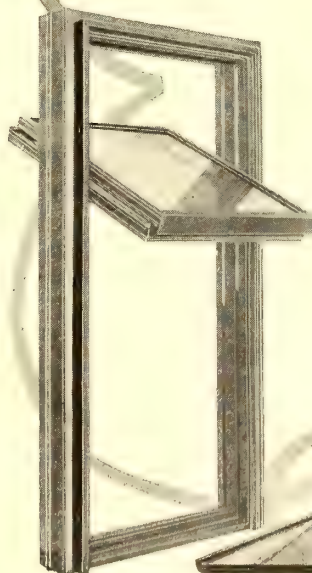
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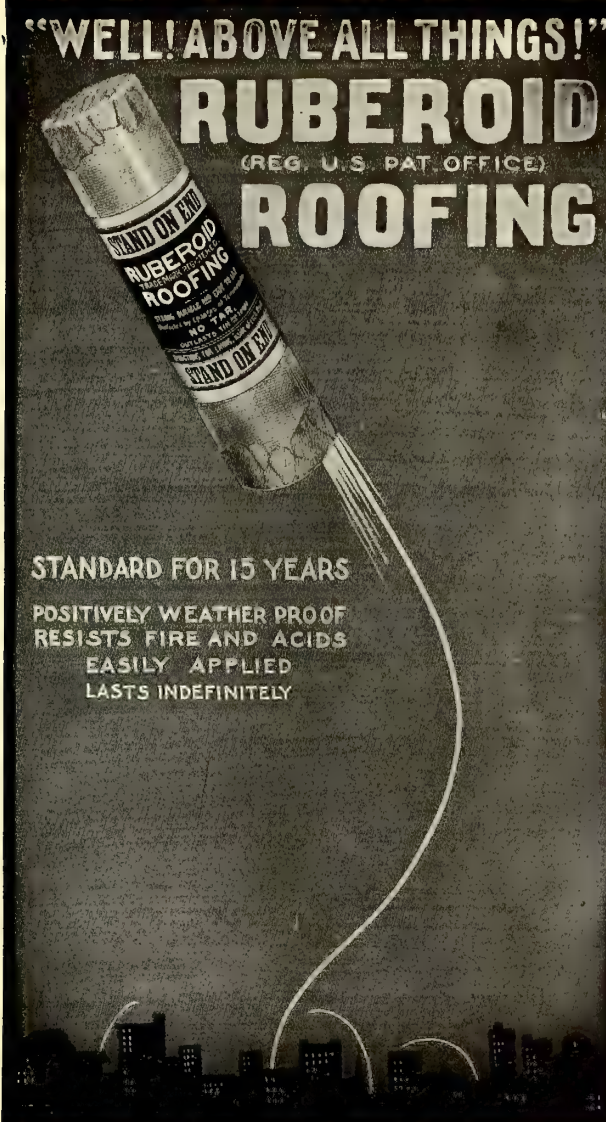
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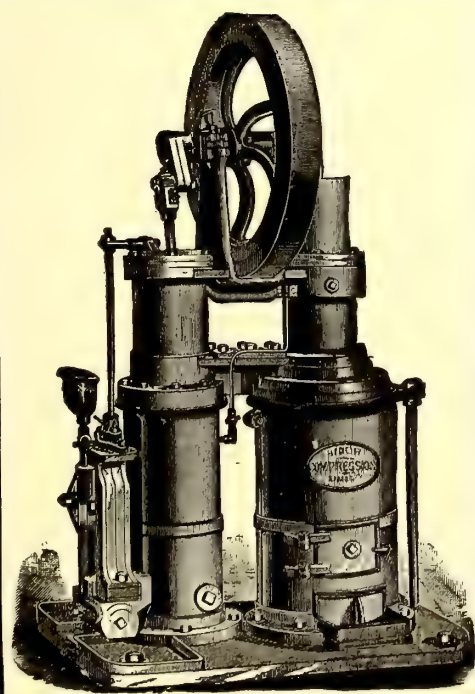
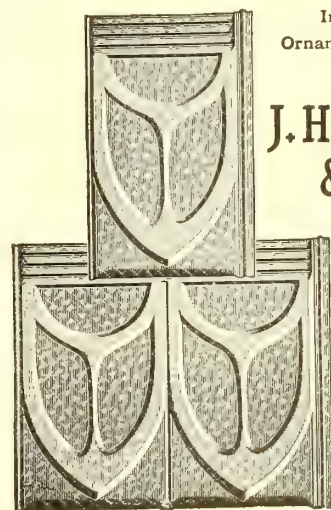
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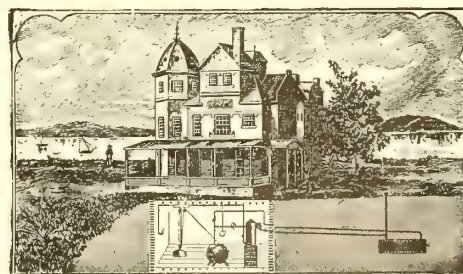
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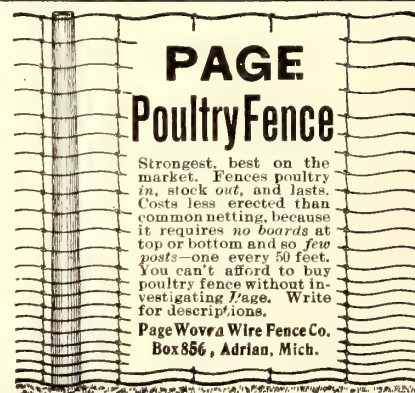
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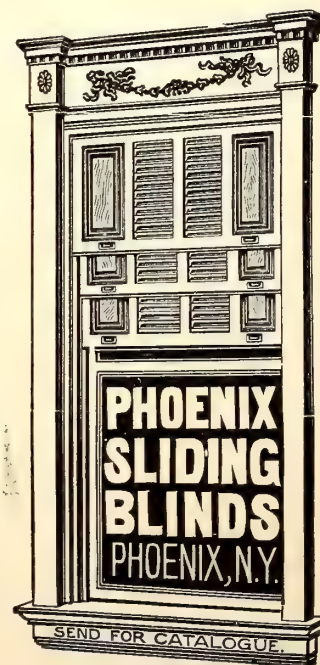
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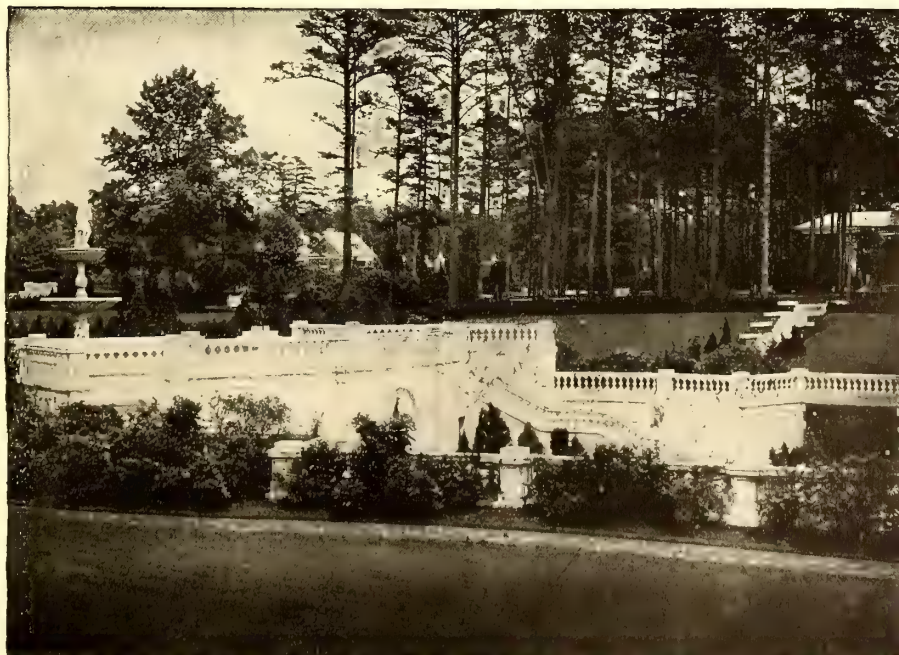
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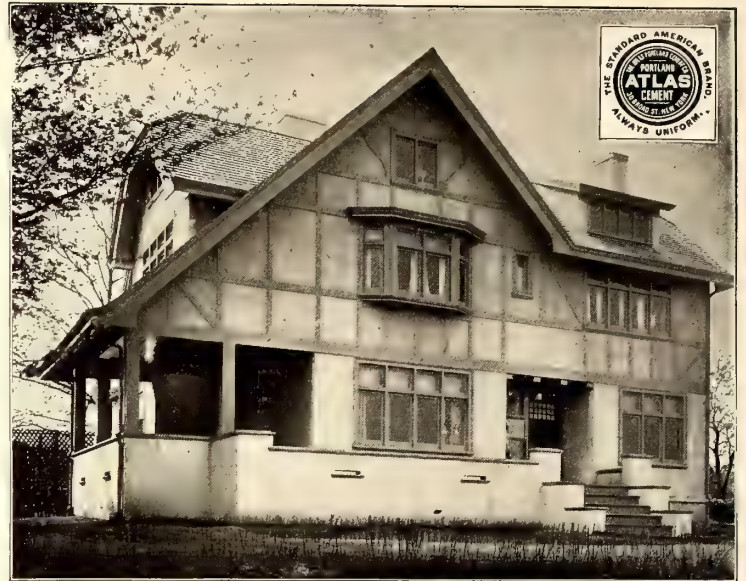


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The Terrace Front of "Laurento," the Estate of Craig Biddle, Esq., at Wayne, Pennsylvania

AMERICAN HOMES AND GARDENS



Volume IV February, 1907 Number 2



The Formal Garden of "Laurento," with Its Central Fountain and Encircling Flower Beds

Monthly Comment



FEW statistics are so interesting to the householder and the landowner as those relating to the increased valuations of real estate. Day after day the comforting assurance is given to landowners, that during the preceding night the value of their holdings has increased by so much per cent. It is a wonderful story, and perhaps nowhere so wonderful as in the large cities, where values increase so prodigiously that dwellings have been known to change hands several times during the process of construction, each time at a handsome advance over the preceding figure. Neither prices nor buyers seem to have limits; the golden stream of money flows on, apparently without end, reaching out into most unexpected regions, and distributing wealth in the most generous manner possible.

THE movement which is reflected in real estate values is typical of our time. It is an expression of unrest. The desire to sell and to turn one's real estate into money amounts to a positive mania. Why retain land which one has held without profit for a term of years, when a hundred per cent., or more, can be gained through its sale? Neighborhoods are changed in a few weeks, "improvements" of one sort or another are projected and carried out without regard to their effect upon others. If one's neighbors have sold, why refuse the golden bribe? There is seemingly no answer but to sell and start life afresh elsewhere.

THE architect, the builder, and the real estate men are helped, and often amazingly, by these operations. Few purchases of real estate are now made save with a desire to "improve." This means new work for the builder, fresh opportunities for the architect, additional gains for the real estate man in further percentages he may exact in later transactions. That many of these operations are so conducted that persons previously unable to own homes may now do so—by assuming fresh obligations of indebtedness—is true. In many senses this is a gain, if the debts can be properly cared for in the end. But the new purchaser is quite likely to be bitten by the selling microbe, and be ready to dispose of his new home, at an advance, to any one who will pay his price.

WHERE, then, is the American home? It is rapidly losing all permanency and is becoming a mere temporary expediency, a place existed in for years, when removal necessitates beginning all over again. We, as a people, are losing, if we have not already lost, all the charm that comes from home association in relation to locality. The men of coming generations, if present tendencies continue, will not be able to point to their childhood's home, for that interesting period, as likely as not, will have been passed in several places, not one of which had any relationship to anything save the parental desire to realize on real estate values. It is a singular and surprising condition that we, who live at the beginning of the movement, can not understand nor foresee the final development.

BUT increased prices for real estate are not the single agency in these changes. The time can not be far away when the word "improvement," as applied to real estate, will be viewed with as much alarm as it now is with complacency. The march of trade has already swept so far up Fifth Avenue, in New York, that the rich folk of the metropolis have been crowded much further north than a few years past seemed

likely ever to occur. And what has happened in the most fashionable street in America has happened in a thousand streets elsewhere in New York and other cities, in places good and bad, in the seats of fashion, and in the outskirts that border on the rural regions. The slums, everywhere, have perhaps held their own more rigidly, with the persistency of evil; but even they have been invaded by the model tenement house, by factories of a new sort, and by other changes, all betterments, all welcome innovations, all desirable features.

BUT the great home belts are likely to be affected otherwise. The good streets—streets of good houses—grow better, and their more modest inhabitants are compelled to seek less expensive abodes; the poor streets grow poorer, and those who would like to live in a better way can find no better place. There is a loss in citizenship here, a loss in civic worth that may perhaps be offset by advances elsewhere, although the individual loss can scarce be bettered. Thus the home changes; it moves from place to place; the house as a home ceases to have meaning or value, and becomes a mere thing of furniture and personalities. The latter, indeed, count everywhere, and under all circumstances; but surely it is something new in civilization when the house ceases to be the home, and only the tables and chairs, beds, tables, and candlesticks have homely suggestiveness, and remind one of one's own abiding place.

ALL these matters are most clearly defined in the cities, where the population is the most crowded, where the various movements may be most readily traced, and where the records of real estate values are most conveniently recorded. But if the speculator in city real estate imagines that this present movement is limited to the area that he himself is personally acquainted with, he makes a grievous error. It is a movement so widespread as to be essentially national; it includes, not the cities alone, but the rural regions also. And to be certain of this the national Department of Agriculture has conducted an investigation into the value of rural real estate values, and announces to the world at large, and to the farmers in particular, that the real estate value of farms, medium in quality and equipment of buildings and improvements, has increased in value in the five years—since the census of 1900—no less than 33.5 per cent. The ratios of increase are, of course, not identical throughout the country. The highest percentage exists in the South Central group, and amounts to 40.3 per cent.; then comes the Western group with an increase of 40.2 per cent.; the South Atlantic, with 36 per cent.; and the North Central States, with 35.3 per cent. The smallest increase is in the North Atlantic States, where it reaches but 13.5 per cent.

AVERAGE figures are apt to be unsatisfactory, for the individual seldom realizes in himself, the progress, or excellencies, statisticians tell him are his. Yet, making every possible allowance for the personal equation, the fact undoubtedly remains that farm values everywhere—taking the country as a whole—have largely increased in the last few years. If any one has a doubt on this subject let him try to buy a farm, or any farm land, at old-fashioned prices, prices that ruled before the day of real estate publications, that were the fashion before the land-boomer came into vogue, prices that were difficult to obtain when no one wanted land, and customers were few and scarce.

Notable American Homes

By Barr Ferree

"Laurento," the Estate of Craig Biddle, Esq., Wayne, Pennsylvania



HE mansion of "Laurento" looms majestically on its hilltop, rising high and stately above the surrounding trees and shrubbery, quite dominating the landscape for many miles around. And a most agreeable landmark it is, designed in a quiet Italian style by Messrs. Peabody & Sterns, architects, of

Boston. It is a large house with spacious fronts, whose length is emphasized by the strong string-course between the first and second stories, and by the low, sloping broad roof with which it is surmounted. It is built of light-brown brick, with terra cotta trimming of a nearly white tone.

The situation is superb, standing on the summit of a hill that rises sharply above the road by which it is usually approached, but with an ample plateau on the inner side, toward which the entrance front is faced. On the roadside the base of the hill is enclosed within a low stone wall, that presently will be thickly covered with vines. At one point, within a

recess, is a water trough for horses; farther on is the entrance, high sandstone piers capped with standing lions and supporting a wrought-iron arch carrying a central lantern: a stately, handsome entrance, as effective as it is simple.

The road within approaches the house by broad curves, for the elevation is considerable, and a somewhat lengthy detour has been necessary to accomplish an easy ascent. On the left the hillside is thickly overgrown with wild shrubbery; on the right are open fields, with the farmhouse and barn—a massive, rough cast structure—quite down in the hollow. The roadbed is fine, with young trees growing on the outer edge, and at frequent intervals are rustic posts carrying wrought-iron lanterns, square in form, and as ornamental by day as they are useful by night. Farther on, but at some distance below, the road overlooks the vegetable garden. Then the shrubbery on the left gives way to open land, and the house, which hitherto has been completely hidden, comes into view. A broad field contains a flock of sheep and the plant-



The Main Hall Is Flanked with Aisles, in One of Which Is the Fireplace with a Mantel of Carved Stone



An Immense Slab of Green Marble Encloses the Fireplace of the Dining-room



The Porte Cochère Is Built of Terra Cotta



The Library Is Finished in Mahogany with Walls of Red Brocade



"Laurento," the Terrace



and Is Directly Before the Main Entrance



The Reception-room, with Paneled Walls of French Gray, Is Louis XVI. in Style



ment and Its Arch of Triumph



The Main Corridor Looking Toward the Billiard-room



An Immense Slab of Green Marble Encloses the Fireplace of the Dining-room



The Porte Cochère Is Built of Terra Cotta and Is Directly Before the Main Entrance



The Reception-room, with Paneled Walls of French Gray, Is Louis XVI. in Style



The Library Is Finished in Mahogany with Walls of Red Brocade



"Laurento," the Terrace Front and Its Arch of Triumph



The Main Corridor Looking Toward the Billiard-room

ing becomes more formal; great clumps of shrubbery are massed in beautifully kept lawns. The house has no great trees near it, those in its immediate vicinity being young. The kitchen entrance is hidden behind a fine planting of evergreens.

A stately porte cochere, built wholly of terra cotta, is erected before the main doorway. It has four great piers, with round arches on the side, and two columns to support the entablature on the front, whence a ravishing view can be had of the magnificent lawn that stretches away from the house, and of the hilltops in the far distance.

In design this house is thoroughly distinguished. The plan may be roughly described as cruciform; that is to say, a great central body to which are applied wings, right and left.

of pilasters, support the simply molded archway. The reason for the thickening of the wall is now apparent, for it gives greater depth to the arch, and transforms what might have been a purely ornamental feature into a monumental one. In the spandrils are two carved disks, which, with the monumental stairway at the base of the arch, complete the structural features of this fine centerpiece. Within, the archway has a double treatment of door and window, the doorway being in the exact center, below a broad horizontal cornice, while the window rises in majestic proportions above it, wholly filling the enclosed space.

The steps at the base of the arch descend upon a spacious terrace, which is built out upon the hillside, with a broader flight of central steps to the slope below. On each side of the



The Dining-room Is Paneled in Dark Oak, Above Which Is a Frieze of Old Tapestry

Mobility is given to the center by slight projections: at the ends on the entrance front, in the center on the terrace front. The detailing is extraordinarily fine, very well conceived, and applied with admirable judiciousness. The large windows are sufficiently spaced, those of the first story having more elaborate frames than those of the second. The cornice at the top is high and flat, with pierced openings over the windows, and then the projecting eaves to the low roof, whose simple outline is broken only by the chimneys and the three dormers on the entrance front.

There is more pronounced enrichment and more variety in the terrace front. On that side the center is projected far forward beyond the wings. In the center is a triumphal arch, rising high to the crowning cornice which its keystone just touches. Roman Ionic columns, with an accompanying pair

center of the house are loggias which connect with the wings, each with its own steps, descending at right angles to the central flight to the great lower terrace. The loggias are built of terra cotta, with piers and columns, and, furnished with rugs, tables, and chairs, are most delightful lounging-places. The outlooks over the countryside from any of these parts are of rare beauty; immediately below is the deep valley and the road, which the house seems almost to overhang; beyond are fields of rich grass, trees and woods, hills and valleys, a lovely country outlook, perhaps nowhere so enjoyable, or so beautiful, as from the doorway beneath Mr. Biddle's arch of triumph.

The entrance door leads to a small vestibule, wholly paneled in wood painted white. Its glazed doors admit to a



The Main Hall Looking Toward the Vestibule. It Is a Splendid White Apartment, Two Stories High

space of similar dimensions and treated in an identical manner. This is without inner doors, but open on to the broad corridor that runs across the house from right and left. Curtains of red damask on three sides convert the center of the corridor into a sort of antechamber beyond which is the great central hall. Quite from the outer door the spacious splendor of this apartment has been visible, for the whole of the center of the house is brilliantly illuminated by the flood of light admitted by the vast window under the arch of the terrace front.

The hall is of regal proportions, rising to the full height of the second story. Ionic columns, on either side, divide it into three bays. It is thus basilical in plan, with aisles on each outer edge, while the central space is supported by the columns and pilastered piers in the corners. Above the entablature are arches enclosing balustrades, and which surround a corridor carried around three sides of the hall at the upper story. Oriental rugs are laid on the marble floor. At the great window arch are curtains of green damask lined with white silk; at the entrance is a green curtain, and at the four doors on the sides, which lead to the other apartments, are

the door and window curtains. The woodwork is mahogany, the mantel, with a facing of green marble, being of the same wood and very richly carved. The hardwood floor has a large Oriental rug, and the furniture is covered with red velvet. The white ceiling and cornice are elaborately molded and detailed. The bookcases which surround most of the lower part of the walls are of mahogany, carved and molded; they are enclosed within leaded glass doors of beautiful design. The room is lighted by side brackets. Immediately adjoining is Mr. Biddle's den, a small room in green, with green walls and green curtains over lace curtains at the single window.

The billiard-room is at the end of the corridor, and completely fills this farthest end of the house. It is treated throughout in warm brown. The floor is formed of large dull-red bricks, on which are many small Oriental rugs. It is paneled in wood to the frieze, which is of carved leather depicting hunting scenes. The ceiling has wooden beams, corresponding with the rest of the woodwork, the panels being filled with leather, of the same beautiful warm-brown hue which characterizes the whole room. The curtains, both for



The Entrance Front Is a Dignified Composition in the Italian Style

tapestry curtains of blue and yellow tones. On the left, within the aisle, is a handsomely carved fireplace and mantel of white stone; on the opposite wall, in the aisle, is a superb piece of tapestry. In the center is a green marble table with white marble feet: it supports a richly carved vase. In the corners by the entrance are marble statues.

The rooms on either side may be reached from the central hall, but it will perhaps be more convenient to visit them from the main corridor. Like the hall and vestibules this is floored with white marble, spread with rich Oriental rugs. On the right it leads to the billiard-room, situated at the extreme end of the house; and on the left it connects with the servants' quarters. It is so broad, and high, and spacious—as are all the apartments on this floor—that it has a true monumental character. Its chief decoration is a series of busts of Roman emperors, of which six are in the right hall, while two stand in the farther corners of the left extension. These sculptures are nobly placed, and add immensely to the monumental effect of the corridor.

The first room on the right is the library; it is also directly entered from the great hall. The walls are covered with red striped damask, the same rich material being used also for

the doors and the windows, are of brown leather with green and gold bands. The spacious mantel is of wood and is a part of the wainscot. The facings are of red brick similar to the floor; immediately above, in the center, is a large deer's head. The windows have white lace curtains within the leather curtains. At either end is a low platform with a built-in seat. The furniture is covered with light-brown leather. The great height of the ceiling adds immensely to the effect of this beautiful room.

The reception-room is opposite the library and faces the entrance front of the house. It is designed and furnished in the Louis XVI style and is a delightfully cool and charming apartment. The paneled walls are in French gray. There is a built-in mirror over the fireplace, which has facings of mottled-red marble. The curtains are of pink damask over white. The chairs are of French gray covered with tapestry, and the other furniture includes many fine old pieces of great beauty.

On the left hand side of the entrance doorway are two rooms, both entered from the main corridor. That on the front of the house is the breakfast-room, treated wholly in yellow, with warm-yellow walls, and curtains of the same bril-

liant color. The dining-room is opposite, and is one of the most sumptuous apartments in the house. The walls are paneled in dark oak to the broad tapestry frieze, a fine old piece of unusual beauty. The ceiling is cream color with decorated beams forming small square panels. The woodwork of the doors is enriched with carving, and there are elaborately carved tympanums in the arched doorways on the side. The fireplace is en-

cased within a huge slab of mottled-green marble, to which a shelf of the same rich material is applied. The sideboard, on the opposite side of the room, is built in, and is designed in harmony with the decorative woodwork of the doors and mantel. The hardwood floor is covered with a green rug, and the curtains are of green velvet with gold braid bands. The oak furniture is very elaborately carved. The room is lighted by gilt sidelights applied to the panels of the walls.



The Massing of Foliage Plants and Trees Is Admirable

One end of the house, the nearest end as it is approached by the entrance driveway, is wholly given up to the service. The planting here, as has been stated, consists of evergreens, arranged in picturesque masses. At the farther end is a small formal garden, the chief ornament of which is a marble fountain, placed exactly in the center, and formed of a charming group of children playing in a small marble basin. Concentric beds of circular segments

are planted around the fountain, until the corners are filled out in squares. The planting is chiefly annuals, arranged in brilliant masses of color. The whole is enclosed within a hedge. At the farther extremity beyond the fountain the land dips suddenly, but the ravine is partly screened by the garden hedge. Beyond are hills, with trees and woods, a beautiful outlook over the many beautiful spots within and without the estate grounds.

Public Cleanliness



UBLIC cleanliness is the most practical form of civic embellishment. It may not be too much to say that it is the most important form; for public health is always to be counted as of greater value than public enjoyment, and it is surely better and wiser to live in a thoroughly clean city, one in which public sanitation has been brought to a high degree of development, than in one that may be outwardly beautiful but inwardly unsound and unhealthy.

Health and beauty do not seem always to have gone together, although there is nothing opposed to joint development in either. Most moderns suppose, and with every reason, that the medieval cities were places of strange and wonderful beauty. The little old houses which have survived from the Middle Ages in various places on the Continent of Europe are very convincing and very fascinating testimony to this effect. But it is also very clear that they are now atrocious houses to live in, and the results of investigations into the sanitary conditions of the Middle Ages show that this has always been their state. In other words, the beautiful and fascinating cities of the past were enormously unhealthy and quite unsafe to live in.

Modern investigation has opened up an entirely new subject in the science of sanitation. So rapid have been the advances of sanitary science that one almost wonders how life was supported while its tenets were unknown. But sanitation occasions no discomforts when properly applied to the

conditions of modern life, and in this sense it becomes one of the most important handmaidens of civic betterment. This, however, is a matter for the specialist. The average citizen is not a specialist in sanitation. His personal influence is limited to doing what he can, or in refraining from settling in a place that is not properly equipped with sanitary appliances. The latter move is often highly effective; for it is the highest ambition of every community to attract residents to it. The town that has good sanitation will invariably attract more people, and be itself more prosperous, than the town in which these conditions are bad.

But there is work for the private citizen to do under this head, and work he should not avoid. He can at least keep his house and surroundings clean and do his share toward maintaining his street in a clean condition. This duty is just as imperative when the municipality undertakes this work as when it does not. The most effective system of waste collection will fall down at times, and even if daily collections be made the daily accumulations will often be unsightly before the collecting wagon comes around again.

No dirt or waste of any sort should be permitted to remain in the streets after it has been seen. It may not be your business nor mine to remove it, but if it happens to be close to our homes it is simply public duty that should not be evaded. A good deal of volunteer work needs to be done in this direction, and the doing of it entails no disgrace and works no hardship. We can not safely spare any effort to be apparently clean.



The House of Norman Ellison, Esq.

at Merion, Pennsylvania



By Paul Thurston



HE house of Norman Ellison, Esq., at Merion, Pa., forms an excellent subject for illustration. The design is simple with Colonial effects, and the form, while square in its outlines, has many good features, with its entrance porch with seats on either side, its white-painted wooden shutters at the first story, and its combination piazza and pergola; all of these are admirable features, and form the means by which the square outlines of the building are lost in its treatment.

The outside walls are built of rock-faced local stone laid in white mortar with wide joints. The trimmings are all painted white. The roof is covered with shingles, and is left to weather finish a natural silver-gray color.

The plan is a splendid example of what is termed the modern "up-to-date" house, as a study of the arrangement will reveal. It shows the elimination of the "parlor" by providing as a substitute a large living room, a room fitted up, as is shown in the photographic illustration, with comfortable chairs, attractive tables with lamps, and a large open fireplace, the whole presenting a place where comfort predominates, and which all may enjoy. This photograph, being taken in summer, shows the furniture covered with chintz, which gives a bright, cheerful tone to the room, and yet is cooling in its effect, doing away with the hot, stuffy upholstery which seems so good and comfortable in winter, and yet so warm and uncomfortable in summer.

This room is trimmed with white

pine, treated with ivory-white paint. The large open fireplace is built of klinker brick laid with wide mortar joints, and is furnished with a large Colonial mantel. At one side of the fireplace a French window opens on to the porch, which is isolated from the entrance, and in winter is enclosed with glass, forming a sun-room, which is now quite an important feature attached to the modern homes of to-day, with their increased up-to-date requirements.

Another feature of this plan, which shows a departure from the conventional, is the doing away with the hall and its usual staircase. The space of a hall, as in this case, is saved, and the stairs, while isolated in a way, are conveniently placed. They are separated from the living-room by a broad archway, and are very attractive in their design, with white-painted balusters and a mahogany rail. This form of arrangement gives the full breadth of the house to the living uses of the owner of the house. Off this stair hall is the den, for the man of the house, which is trimmed with chestnut and finished in Flemish brown. Indian wall paper and mission furniture complete this room. The conservatory opens from the den,

and has a cement floor connected with a drain.

To the left of the entrance is the dining-room, which is furnished with white-painted trim, yellow wall decorations; a plate rack extends around the room, above which the wall is finished with a heavy molding. There is a fine old china cabinet in the corner of the room, and, with the other furniture of mahogany, makes a most attractive and delightful room.

The large but-



The Combination Piazza and Pergola Are Agreeable Parts of the Outdoor Life of the House

ler's pantry, laundry, and kitchen are trimmed with yellow pine treated with hard oil and varnish, and each is fitted with all the best modern and sanitary improvements.

The second story is treated with white-painted trim, and delicate and artistic wall decorations. This floor contains three bedrooms and two bathrooms; the latter are well placed for convenience to each room, and are furnished with porcelain fixtures and exposed nickel-plated plumbing. The owner's room extends the entire depth of the house, with exposures on three sides. There are two bedrooms and a bathroom on the third floor, besides ample storage space. A cemented cellar contains the heating apparatus, fuel rooms and cold storage.

Well designed and planned houses of this character are not common, and Messrs. McIlvain and Roberts, Philadelphia, Pa., the architects of this particular house, have demonstrated the possibilities of a good house confined in a small compass.

One of the most difficult problems which an architect has to contend with, in the building of the modern house of the character of this one, is to secure the necessary co-operation of his client in adopting the best principles of simple form

idea and do away with the "parlor," which seems to be the essential and foremost thought of the average housewife, is certainly a triumph. Parlors in small houses usually occupy the best and most important part. This is certainly a false conception of the modern housewife, for in them is usually placed the most uninviting and stiff-looking furniture and formal furnishings, and there is thus created an air that forbids comfort.

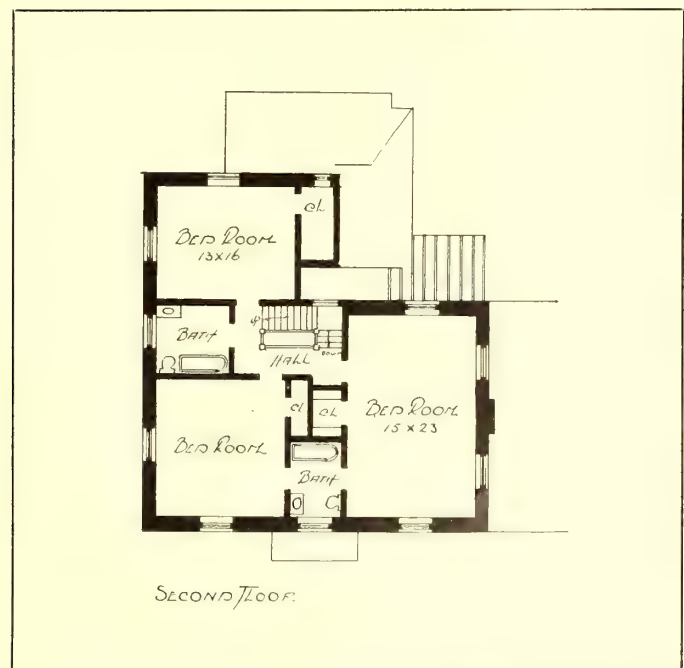
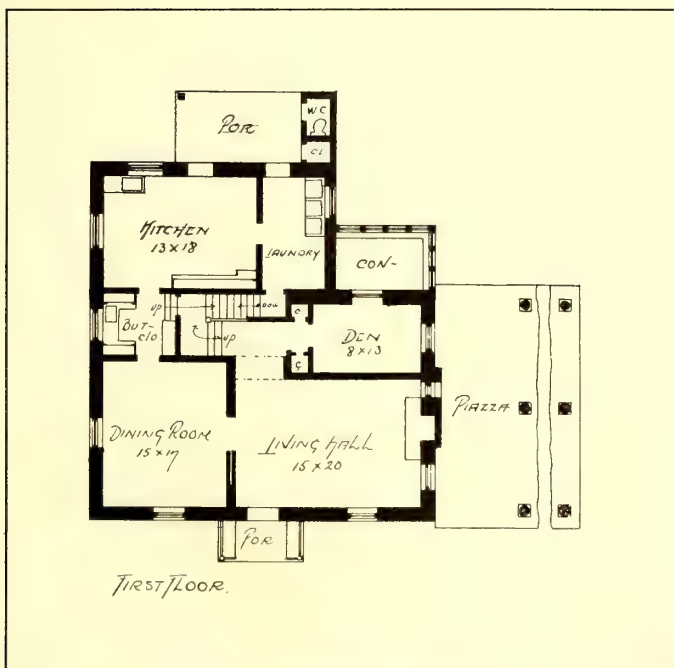
The best modern houses, of small dimensions, as in this particular case, are provided with a stairway of secondary consideration and a great, large living-room in place of the conventional parlor.

The architects have been most successful in planning for Mr. Ellison a most interesting interior arrangement, and an exterior design of no small moment. The pergola piazza is an excellent feature, forming an outdoor liv-

ing-room, which is distinct and separate from the entrance porch that pierces the house. On the interior all the rooms are made to live in, and each is furnished for the purpose for which it is intended. Each apartment is fitted up with all the best modern conveniences. The construction of the house is simple, though of the very best materials, and



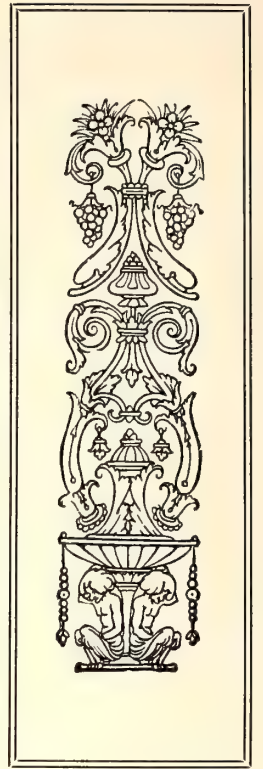
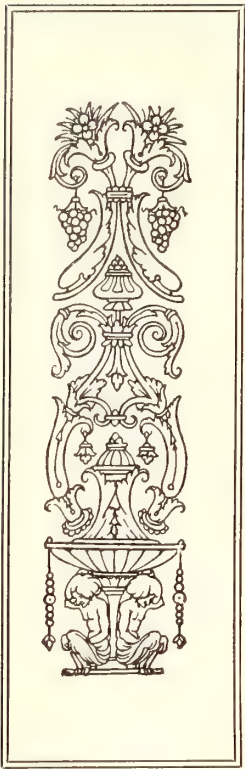
Rock Faced Local Stone Laid in White Mortar with Raked Joints, Is the Material of Which the Exterior Walls Are Built



Complete and Compact Are the Plans in Their Arrangement of Rooms. A Study of the Combination of the Stairways Is Worthy of Notice

and architecture in the building of his house. To secure his permission to do away with the hall and the staircase, which usually forces its presence on everyone immediately upon entering the average house, is an excellent move, but to get him to modernize and simplify his ideas to the modern

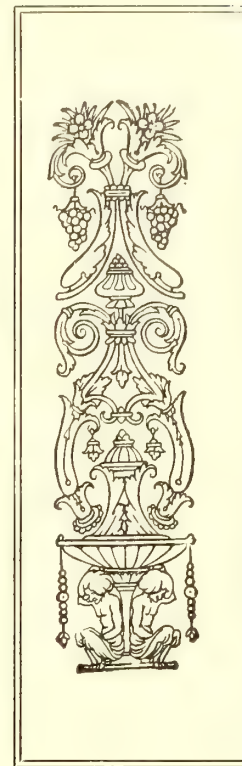
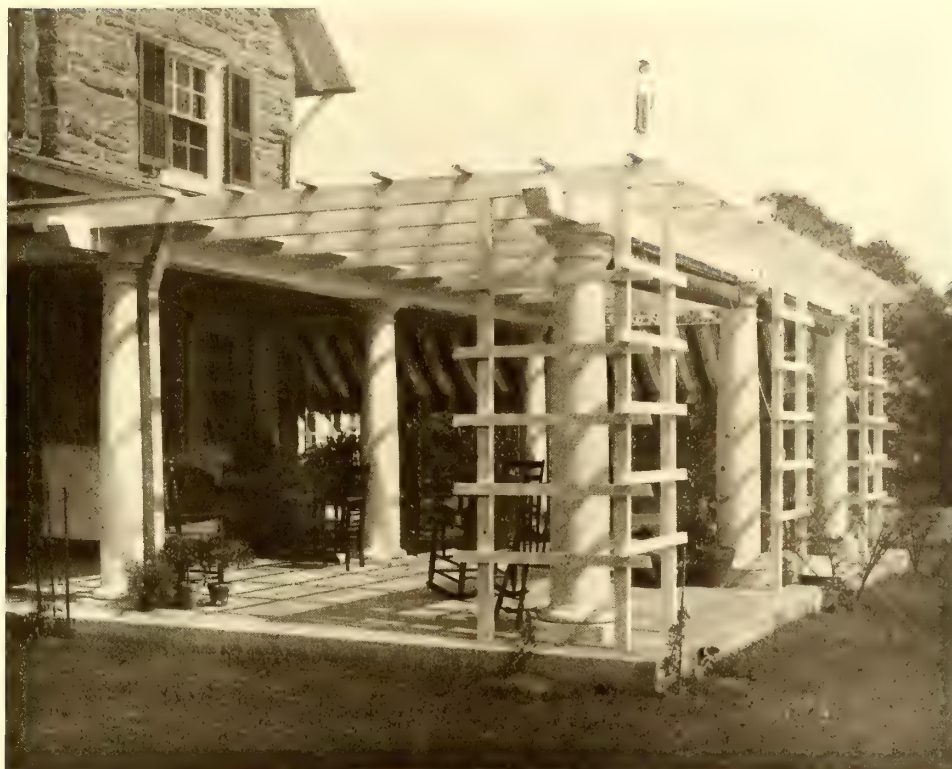
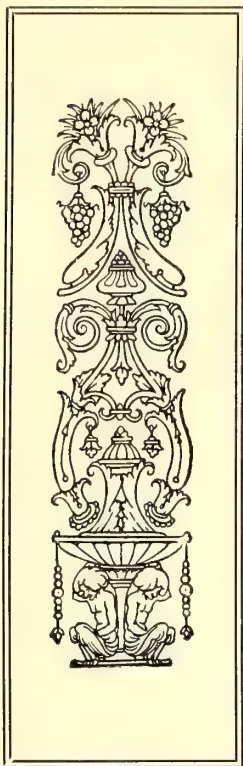
the interior appointments are simple, though of the very best of their respective kinds. Taking the house as a completed whole, as meeting modern needs, it certainly is one of the best examples to be found in its vicinity. It well merits all the study that can be given to it.



White-painted Trim, Yellow Wall Decorations, and the Old Mahogany Furniture Characterize the Dining-room



A Departure from the Conventional Is the Doing Away with the Hall, and Making the Staircase a Secondary Consideration



The Porch Is Enclosed with Glass in Winter, Forming a Sun-room. The Open Pergola Is an Excellent Feature



This Photograph Was Made in Summer and Shows a Very Harmonious Treatment with Chintz Coverings for the Furniture, a Klinker Brick Fireplace and a Large Colonial Mantel

Mrs. Slater's House on the Hunt Estate

In the Heart of the Blue Hill District, Near Boston, Massachusetts

By George Brayton



THE beautiful country home of the late artist William Morris Hunt, situated in the heart of the Blue Hill District, just outside Boston's suburbs, is still in possession of the family, three of the children having separate homes within its spacious grounds. Of these, the most noteworthy is that of Mrs. Mabel Hunt Slater, a daughter of the artist, and widow of the late Horatio N. Slater.

Four years ago last July, the first tree was felled, in order to lay the foundation of the house, the beautiful grove "Pine Bank" having been selected for a site, and during the past year Mrs. Slater has converted the new residence into what already seems like a delightful old English homestead, mellowed and enriched by the passage of time.

Setting fairly astride the crest of the ridge, it is surrounded by hundreds of oak, pine, and other trees, and is

approached by an avenue which winds picturesquely up the hill, making a broad sweep to the spacious porte-cochere, from which a commanding view of the distant horizon is obtained, overlooking several peaceful villages and the Neponset River, winding its sunglinted course far below.

The estate consists of nearly one hundred acres, and the utmost care is taken that its natural advantages shall not be lessened by undue artificial treatment. A musical brook runs through the grounds, adding the welcome element of water; this stream may eventually be converted into a miniature Dutch canal, affording the children of the neighborhood opportunities for boating and skating.

The front of the house stands upon a terrace, and is chiefly of cypress timbers and stucco; its color is agreeably heightened by a red-tiled roof, on which the sun gleams in the midst of the shadows of the pine trees.

The basement is of red brick, treated with unusual deco-



Oak, Pine and Other Trees Surround the House, Which Is of the English Style with Half Timber Work

rative effect, and on either side are retaining walls, with a terrace one hundred feet long, on which large, quaint Italian

with cedar logs, and beautiful with the prismatic tints of drift-wood. Over the fireplace is a mantel of gray stone, on which are placed fitting ornaments. The walls are hung with heavy Flemish tapestry, and with articles of old-time warfare.

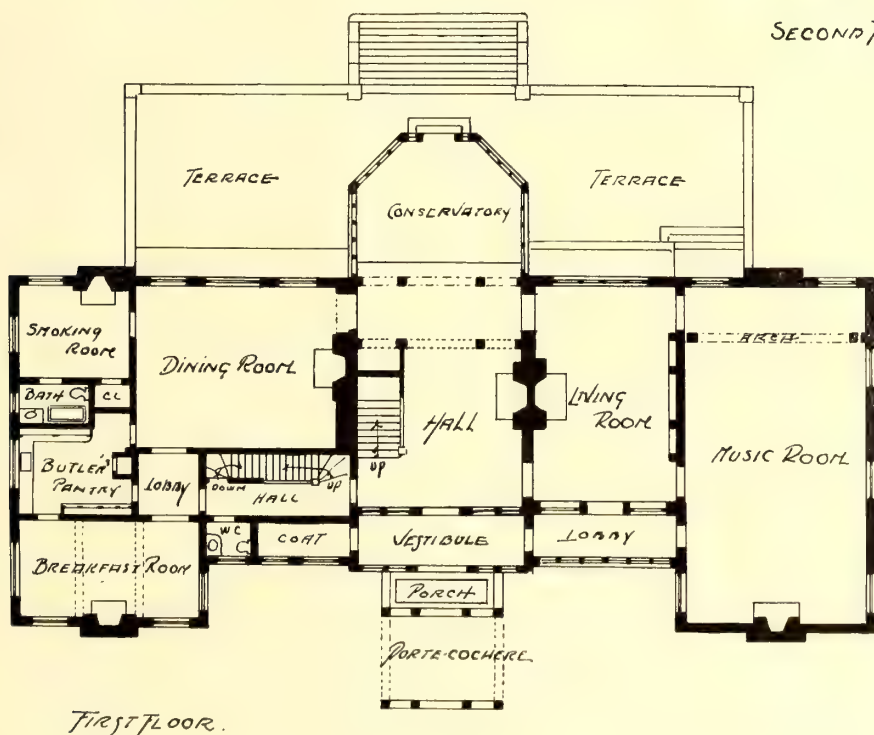
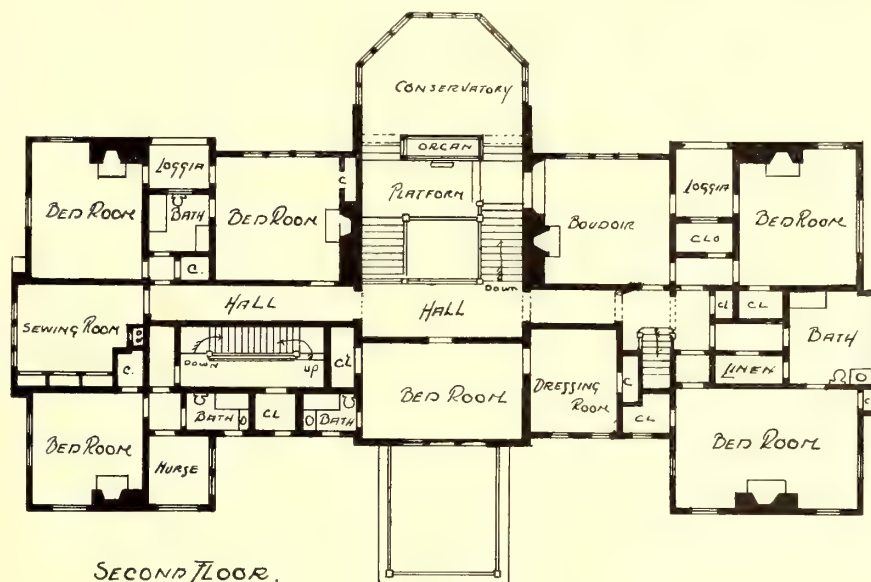


The Ball-room Has Paneled Walls. The Color Scheme Is White and Gold. Furniture of the Louis XV. Period Is Artistically Placed About the Room, While Handsome Cabinets Containing Rare and Costly Vases Are Placed Along the Walls

vases add quite perceptibly to the general picturesqueness. The vestibule is finished in arched work of stucco, with a flooring of Grueby tiles; it is rich in the quaint Dutch furniture of the early part of the eighteenth century. The door of the main hall is opened by a unique and artistic device, an antique-looking figure in green bronze, which bears on its extended arms a large key. It is the work of H. H. Kitson, the Boston sculptor, who presented it to the hostess of the mansion in token of her cordial hospitality.

Entering the main hall, a scene of enchantment meets the eye. The hall itself is English in effect, but the knights in armor, one upon a steed also in armor, makes one's thoughts revert to Warburg Castle, in Eisenach. The furniture is massive, and the great tiled fireplace of old wrought iron adds to the general effect of a baronial hall. Here a cheerful fire burns constantly, fragrant

dor of it all comes to view. A grand organ crowns the hall, built in part over the conservatory underneath, and giving a



fine architectural effect, which is greatly heightened by the presence of Mr. Hunt's "Flight of Night," that superb picture which remains from the tragic wreck of his mural paintings placed upon the walls of the State Capitol at Albany, N. Y., only a few months before his death, in 1879. This was probably the most complete of all his studies, made for the great final work, and has been cherished tenderly by his family, and now finds its home in this fitting and harmonious setting. The crowning glory of this hall, indeed of the whole house, is this wonderful picture, never seen to such advantage as now; placed in the organ, it has a deep significance which only a poetic nature can wholly fathom. It might be the theme for a great epic poem.

On the right of the organ is a seat for the player, the banks of keys, and the pedals. A unique balcony of wrought iron extends around the conservatory and leads to a small piano, which fills the space on the opposite side of the organ.



The Breakfast-room, Dutch in Character, Has a Carved Wainscoting to Set Off the Antique Furniture of this Room. Its Effect Is Relieved by the Chair Backs and Seats of Red Leather

On the wall space near the stairs, a large Flemish tapestry lends richness of color, and directly across hangs one of Mr. Hunt's matchless charcoal heads, a work worthy of Michel Angelo, yet modern to the last degree, and here very suitably placed amid many mementoes of the artist.

Returning to the lower rooms of the house, on the right of the hall is the library, with its ceiling of dropped-beam work, its series of English mullioned windows, extending along the west end, and affording an excellent light for the paintings upon the walls. Into these windows are introduced a few symbolic emblems in stained glass, of interest to the family chiefly. The library shelves are filled with rare volumes, ancient and modern.

Among the paintings in this room are works by Troyon, Diaz, Jules Dupré, De Neuville, and Jacques, while the walls are dominated by Mr. Hunt's "Jewess," painted while a pupil of Thomas Couture, and mistaken by Isabey for a work by the master of the class. Three other paintings here are by Mr. Hunt. A handsomely carved settle is one of the features of the library, which is one of the most attractive rooms in the entire mansion.

On the left of the library is the ballroom, its length of fifty feet apparently

its wide, rich border, it arrests the eye with compelling power and holds it until its beauties are comprehended, even by those who are not connoisseurs. The two other tapestries on the side of the long wall are of the same exquisite beauty, but a little smaller. The three furnish the controlling notes of color in this spacious salon.

A sedan chair, once owned by a princess, occupies a position near the fireplace, and is used as a cabinet for rare china.

doubled by the heavy French mirrors which are placed in several of the large panels. The color of the room is white and gold, while its furnishing is a combination of delicacy and richness. In front of the fireplace lies a splendid tiger skin, while in the center of the room is a rare white silk Persian rug, upon which a dos-a-dos arrangement of seats encompasses a group of palms and azaleas, and, like the other seats and sofas, are of the Louis XV period, of exquisite silken coverings, set in gold. Beautiful tables, ornamented with the choicest china vases, lend richness to all.

Its chief distinction, however, lies in its three antique silken tapestries of the finest "point." They are from the famous Gobelin manufactory, and were made from cartoons by Wouverman's. The largest, at the west end of the room, is a veritable work of art. With



A Pipe Organ Crowns the Hall, Giving a Fine Setting Which Is Greatly Heightened by the Presence of the "Flight of Night," Painted by the Late Holman Hunt

The only modern piece here seen is a grand piano. Of the long French windows, draped with rare lace, one leads out upon a terrace, where we look to find a foreign scene, in keeping with this luxurious salon. It is, however, no disappointment to find the Neponset River winding gently along behind the tall pines, the blue haze of the western hills completing this choice view of beautiful American landscape.

Crossing the main hall, the visitor comes to the large and elegant dining-room, deeply wainscoted in San Domingo mahogany. Here the walls are covered with dark-red linen, dull in finish, making an admirable background for the old Spanish sideboards and chairs, also of mahogany. On the walls are family portraits, and a few French landscapes. Over the mantel hangs Mr. Tarbell's portrait of Mrs. Slater and her four children. Its effect is finer than when shown in the gallery of the Art Museum in Boston, where the strong light was not as favorable as its present environment affords; it is a remarkably fine portrait group, especially in color and in fine contrasts.

Adjoining the dining-room is the smoking-room, with its walls of fine Spanish leather. As in the others, this room contains several paintings of undoubted value and interest.



Over the Entrance to the House Is a Large Room Known as the "Play Room," In Which Are Kept the Musical Instruments

In the front of the house is the breakfast or morning room, furnished with rare taste.

The second floor is devoted chiefly to the family. On the upper floors there are numerous guest rooms, many of them en suite. Over the entrance, on the upper floor, is a large room, running the entire width of the house, known at the "Play Room." Here is a grand piano, violins, a ping-pong table, music and books in abundance, a large open fire, plants and flowers in generous profusion.



A Fine Stable, Designed in Harmony with the House, Completes the Buildings of the Estate

Three Modern Houses

By Burr Bartram

A Model Suburban Home Built for M. F. Neuber, Esq., at Glenside, Pennsylvania



HE illustrations of Mr. Neuber's home at Glenside, Pa., as shown in Figs. 1 and 2, exhibit an excellent example of a model suburban house, suitable for a forty or fifty foot lot. The underpinning is built of rock-faced stone, laid up at random and pointed, with wide joints in white mortar. The superstructure is of frame, with the exterior framework covered with matched sheathing, good building paper, and clapboards painted white, while the roof is covered with cypress shingles stained a very dark green.

The reception hall and the interior throughout is of chestnut, finished a deep shade of brown. It has an ornamental staircase of unique design and an open fireplace built of brick. The library and dining-room are separated by sliding doors, and the latter has a window seat with a cluster of windows over it, and two built-in china closets. The plan provides for a large and airy kitchen, with pantry, fitted up with a dresser, shed large enough to admit an ice-box, dresser, sink, and range.

The second floor contains an open hall with nook fitted up for a den, three bedrooms, and a bathroom. Each of the bedrooms have good closets, and the bathroom has porcelain fixtures and exposed nickel-plated plumbing. There is a storage-room on the third floor. There is a hot-water heater in the cellar which contains the fuel rooms. Mr. C. E. Schermerhorn, of Philadelphia, was the architect of this house.

A Dwelling Built for Edwin J. Lucas, Esq. At Mount Vernon, New York

The modern dwelling illustrated in Figures 3, 4, and 5, and built for Mr. Edwin J. Lucas, has an underpinning and first story of rough rubble field stone. The second story, of wood, is covered on the exterior framework with matched sheathing, and then cedar shingles, which are left to weather finish. The roof is also covered with shingles.

The hall and living-rooms are trimmed with white pine, treated with ivory-white enamel. These two rooms are separated by an archway, supported on fluted Ionic columns. The stairway has oak treads, painted risers, posts, and balusters, and a



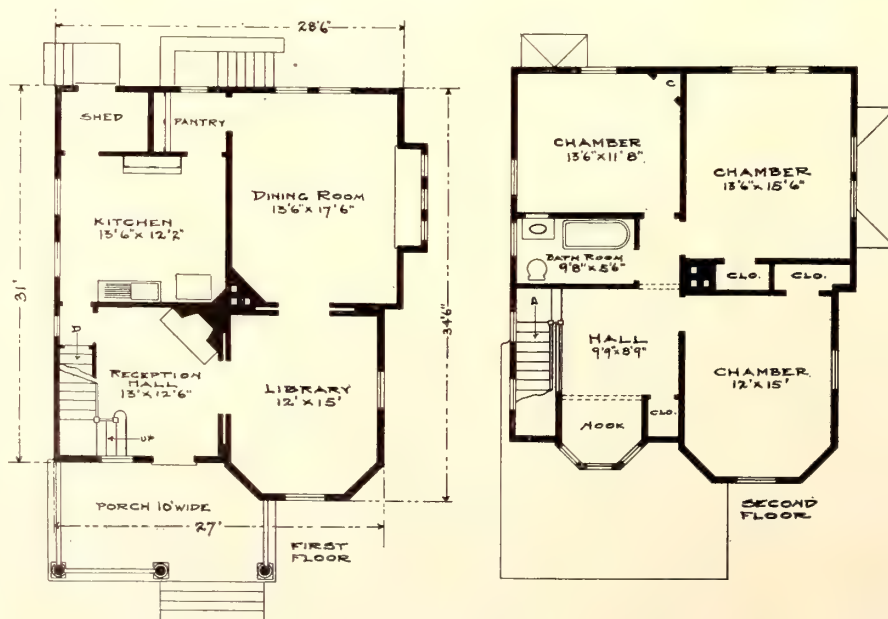
1—White-painted Clapboards and a Dark-green Shingle Roof Constitute the Color Scheme of the Exterior

mahogany rail. The ceiling is beamed, and there is a paneled wainscoting, as well as a seat at the side of the staircase.

The living-room has a high-paneled wainscoting, the same as the hall, and the walls above it are covered with crimson burlap. The ceiling is beamed, and the bay window has a paneled seat. The large open fireplace is built of rubble field stone with a hearth of brick and a shelf of stone, rough-hewn. The dining-room is trimmed with chestnut and is finished with a soft-brown color.

The butler's pantry and kitchen are well fitted up with the best modern conveniences, and the lobby is large enough to admit an ice-box.

The second story is treated with white enamel trim and mahogany doors. It contains an open hall, four bedrooms, and a bath, the latter being tiled and furnished with porcelain fixtures. The servants' quarters and trunk-room are placed on the third floor. The cemented cellar contains a laundry, furnace, and fuel-rooms. Mr. Herbert Lucas, of New York, was the architect of this house.



2—Eight Rooms and Bath Are Presented in the Plans

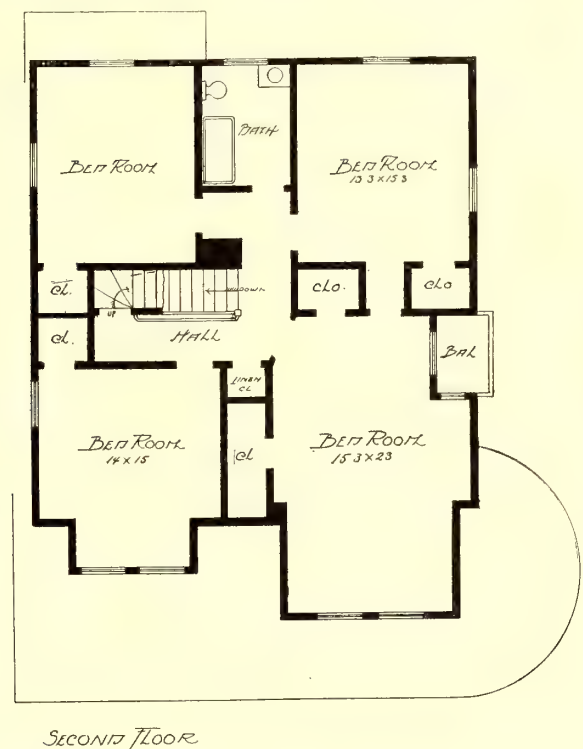
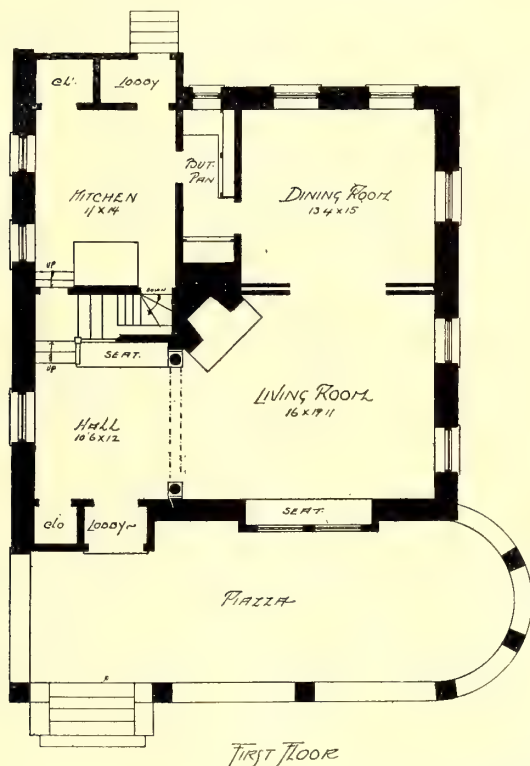
A House Built for William Roberts, Esq.
At Ogontz, Pennsylvania

A house built for Mr. Roberts, at Ogontz, Pa., is shown in Figures 6 and 7. The underpinning, built of long, flat, local stone, is neatly pointed with lime and cement mortar. The remainder of the house is of frame, sheathed and covered with pine shingles, which are stained a dull-olive color. The roof is also covered with shingles of cypress, and stained a darker shade of olive. All the trimmings are painted ivory white.

The main hall, including the stairway, and the parlor and dining-room, are trimmed with red oak stained a medium antique. The stairway is an ornamental one, and is provided with a bay window



3—Rubble Field Stone and Shingles Are Happily Combined for the Exterior



4—The Plans Show an Excellent Arrangement of Rooms

and seat on the first landing. The parlor has an open fireplace, furnished with a tiled hearth and facings, and a mantel. A special feature of the dining-room is the small porch opening from it, which may be enclosed with glass in winter, forming a conservatory. The butler's pantry, kitchen, and laundry are trimmed with North Carolina pine, and each is furnished with all the best modern conveniences.



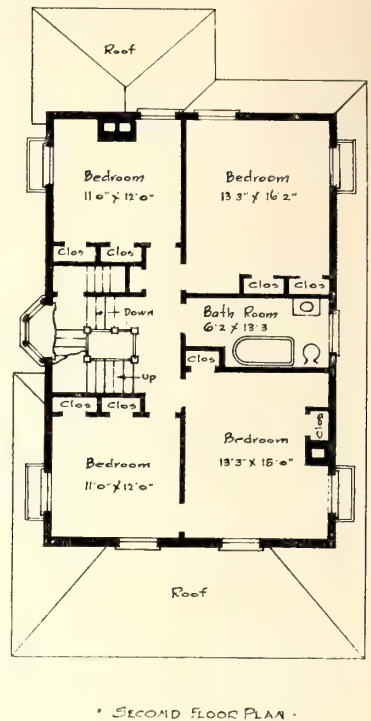
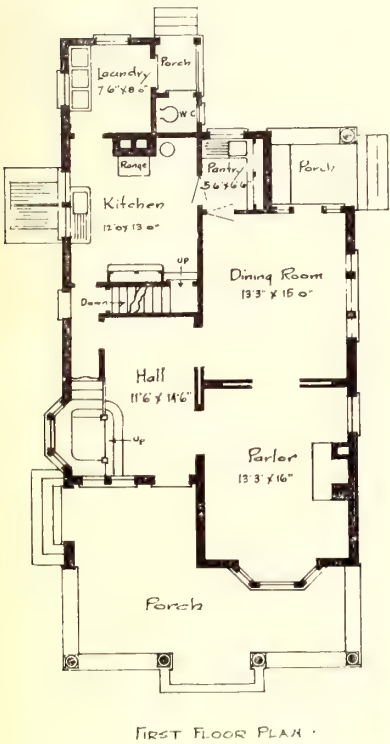
5—An Arch Supported on Ionic Columns Forms an Interesting Separation Between the Hall and Living-room

The second story is trimmed with chestnut, and contains four bedrooms, two of which are treated with ivory-white paint, while the remaining two are finished natural. The bathroom is tiled, and it is furnished with porcelain fixtures and exposed nickel-plated plumbing. The third story is also trimmed with chestnut, and it contains the servants' quarters and ample storage space. A cemented cellar contains a

hot-air furnace and fuel-rooms. Mr. Lawrence Visscher Boyd, of Philadelphia, was the architect.

In the designing of small houses of this character, it is well to remember that it has required considerable thought

A lean-to roof falls gracefully over the porch of which it forms a covering. Mr. Lucas has given the lean-to effect in his roof lines, but he has omitted the towers and has pierced the roof with dormer windows, broad in dimensions,



6 A Gambrel Roof House with Olive-green Stained Shingles and White-painted Trim

on the part of the various architects, in securing the very best possible arrangement of rooms combined with, and fitted to, an exterior that is as equally well balanced and interesting, and one that is pleasing to the eye.

The various materials of which the houses are built are of the best of their respective kinds, the workmanship is good, and the appointments are of the most serviceable and convenient sorts.

Mr. Schermerhorn has presented a very good design of a house for a narrow suburban lot, with wood square-formed rooms on the interior, while the only break on the exterior is the tower, which is so often an impossible feature from an architectural standpoint, but in this instance it fits in well and gives a certain amount of dignity to the exterior.

and adding much to the interior arrangement of the room. The plans, while quite similar in their arrangements, have a little more openness on the first floor than Mr. Schermerhorn's house, but this is simply a question of personal desire on the part of the client.

The plans which Mr. Boyd presents are along the same lines, but he has accepted the gambrel roof style in which to enclose his ideas. The entrance to the house is from the side, giving a broad expanse to the front, and necessitating only one walk in which to reach the entrance and the service end of the house.

Taking the three houses as a group they present a similar interior plan with a distinct style for the exteriors and are characteristic of good taste.



Monticello

By Waldon Fawcett



HERE is not, in all probability, in the entire South a Colonial estate which retains all its pristine beauty in greater degree than does Monticello, Thomas Jefferson's noble country seat in central Virginia, the scene of the private life of the author of the Declaration of Independence. Aside from its historic associations, Monticello is, next to Mount Vernon, the most interesting private habitation in America. This classic mansion is well worthy of attention as an architectural masterpiece, and ranks as the finest remaining example of the old Southern-plantation manor-house of the Revolution.

The nucleus of Thomas Jefferson's Virginia estate he inherited from his father, the tract comprising one thousand nine hundred acres. To this extensive additions were made by purchase, and the aggregate acreage was further increased by several fine farms that came to Jefferson as his wife's dower. During the major portion of Thomas Jefferson's period of occupancy the Monticello estate comprised con-

siderably more than five thousand acres, but during most of the time only one thousand one hundred acres were farmed.

The estate is located in the broken and picturesque Piedmont region of the Old Dominion, and the manor-house at Monticello is a landmark for the entire countryside and the nearest town. It may be seen clearly outlined against the sky from Charlottesville, three miles away. While yet a student Jefferson chose one of the boldest mountains in his estate for his permanent home, and on this summit, which he named Monticello—the Italian for “little mountain”—he cleared and leveled a site of ten acres, upon which he built from his own plans the stately and magnificent mansion which stands to this day in a perfect state of preservation.

The present-day visitor to Monticello, like the pilgrim of a century ago, enters the grounds at the rear, in an open native woodland, and a sharp climb is required to reach the elevation on which the house is located. Once this eminence is attained, however, it is easy to appreciate why Jefferson chose this site. The magnificent panorama which lies



East and West, “Monticello” Has a Great Portico



"Monticello," the Home of Thomas Jefferson

spread out on three sides is probably unequaled anywhere in the United States. It extends over the undulating country in a mighty sweep to the Blue Ridge Mountains half a hundred miles away and presents a vista of that picturesque range for a distance of more than one hundred and fifty miles.

The little mountain on the apex of which Jefferson placed his residence is five hundred and eighty feet high, and has the form of a cone. It slopes eastward one and one-half miles to the Rivanna River. Jefferson's birthplace is in sight of the portico of Monticello, and seemingly almost below is the University of Virginia, which he founded. President Monroe lived eight miles down the valley, and the home of President Madison was but a few miles north. From the cupola of his mansion the Sage of Monticello



A Nearer View of the Portico

could gaze upon twelve of the richest counties in Virginia.

The mansion designed by Jefferson and erected under his personal supervision has the plan of a gigantic letter E, the wings opening westward. To the north and south are walks or promenades supported by masonry structures containing servants' quarters and storage-rooms. Masonry-wings of exactly this same character were provided for in the original plans for the White House at Washington in the shaping of which Jefferson had a hand, and it is these wings or terraces which were restored during the recent reconstruction of the Presidential Mansion.

On the edge of the lawn before the house at Monticello, and at the supreme point of vantage for the splendid semi-circular panorama, stands the little building used by Jefferson as a study. This is connected



The Slaves' Quarters and Jefferson's Office Building

with the mansion by a walk. In the rear of the house is a lawn of three acres, with stately old trees all about it. Many of them were set out by Jefferson himself, and not a few were his special importations from Europe, these being, in some instances, the pioneers of some populous species on this side of the Atlantic. Conspicuous among the landscape-gardening features are the remarkable rectangular flower-beds arranged by Edmund Bacon, who was for twenty years Jefferson's overseer.

The Monticello mansion has a Doric order of Roman architecture, with heavy cornices and massive balustrades. The interior is in the Ionic style. The front hall recedes six feet within the wall of the building, and a portico projects about twenty-five feet, with stone pillars and steps. The house was thirty-two years in building. Begun in 1770, it was not completed until 1802, and cost, according to the account-books of its famous architect and builder, only \$7,200 in actual outlay of money. The bricks were not imported from England, as in the case of many of the old Virginia mansions, but were made on the ground by the

slaves. The ornamental material for the house was brought from Philadelphia, and every nail used in the construction was forged in a nail-factory which Jefferson established on the place.

Probably the most impressive feature of the interior is the great hall, which is thirty feet square and extends to the full height of the building, with a music-gallery under the ceiling. The salon where Jefferson was wont to entertain his friends has a floor inlaid in satinwood and rosewood, as highly polished as a table, and cost originally more than \$2,000. Truly imposing is the library, which sheltered the major portion of Jefferson's famous collection of thirteen thousand books, and near at hand on the first floor is Jefferson's bedroom where he died.

Unique in many of its attributes is the tea-room, with its exquisite, carved white-marble mantel. Adjoining it is a little private council-chamber to which Jefferson was accustomed to invite any of his numerous guests with whom he wished to consult in strict privacy. Glass doors connect this closet-like apartment with the tea-room.



The Main Hall of "Monticello"



Mantel and Doorway in the Hall

"Crowhurst," Manchester-by-the-Sea

By Mary H. Northend



TRANSFORMED from meadow and woodland into one of the most picturesque of estates is "Crowhurst," the summer home of Mr. Francis Meredyth Whitehouse, at Manchester-by-the-Sea. The grounds are most extensive, sloping down from the rocky headlands that define the shore, and reaching back to the Kettle Cove Road.

A road cuts through the grounds, separating the home estate from the stables and farm land. At the right, hidden from view, is the house, which has only recently been finished and occupied by the family. The picturesque stables and cottages, used by the employes as homes, make an artistic spot on the landscape at the left, as one drives along one of the roads that lead from Manchester to Magnolia. Everything about the grounds is well managed, with every evidence that they have been treated in a scientific manner carefully thought out. There is no discordant note in the whole estate. The soft-green lawns, stretching to the buildings, the central feature of the farm, are interrupted midway by a pool in which ducks disport themselves.

The buildings are of stucco and half timber with unusual combinations in gables and dormers, thoroughly individual in design. They show interesting openings and give telling projections, such as an architect of taste and ability only



A Glimpse of the Formal Garden and Gateway

could arrange. They follow the Normandy farm style of architecture, and were planned by Mr. Whitehouse himself. They surround a courtyard, entered by the driveway. As one enters here, flocks of fantails whirl over one's head from a dovecote in the tower.

The property is so large that each department has its distinctive situation. At the rear of the buildings is the farm;



The House Follows the Normandy Farm Style of Architecture



The Lily Pond Is a Circular Pool Beautifully Bordered and Placed



The Drawing-room Is Finished in Old English Oak and Has a Curved Ceiling Ornamented in Stucco

kitchen and cutting gardens stretch to the main road, isolated and complete in detail. The permanent summer residence was not erected at the time of the first purchase of the estate. For many years, Mr. Whitehouse lived in one of the farm cottages, as he was desirous of taking his own time in building.

The house was completed only about a year ago from plans designed by Mr. Whitehouse. It stands on the highest elevation of land and faces the ocean. It is a large and handsome country home, constructed of concrete. Massive pillars support the entrance porch and porte-cochere. There are large sloping gables from which rise the chimneys, of more than ordinary size, attractive loggias, and many bay windows. Diamond-shaped panes of glass have been introduced, and add much to the picturesqueness of the windows.

The interior contains many novel features. The lower hall has a floor of tile, from which rises an elaborate staircase of old English oak, brought from abroad and originally a part of Enfield Hall. This leads, by low treads, to a large upper hall, which in turn opens into the various rooms.

The great drawing-room is most interesting and elaborate in design. It is finished in old English oak, and has a curved ceiling richly ornamented in stucco. The dining-room, 30 by 20 feet, opens into the conservatory, and is reached directly from the hall.

The approach to the house, from the main road, is by a wide avenue that curves up the hill to the house itself. On either side are interesting trees and smooth green turf.

One does not see the beauty of the garden until the front of the house is reached. This is English in design and exhibits features thoroughly in harmony with the rough landscape surroundings. At the right rise tall, arrowy trees, which have been left in their natural state and form a breakwind for the tender plants. The woods, which have been cleared of underbrush, and through which paths lead in every direction, are a delight to the botanist, from the time of the coming of the blue-eyed violet to the late glow of the golden-rod. It is refreshing to come upon a garden such as this. There are no marble fragments; there is practically no architectural design, and yet each bed has been so carefully laid out and is so profuse in its blooming that a happy result has been produced. Inside the box borders is an infinite variety of plants; the tiny bluebell, the stately hollyhock, and the soft tint of the rose each adds its own particular charm and gives a distinct feature to the grounds.

In the center is a circular basin, with a graceful surrounding of lilies, dotted here and there, on its surface, with the white of the pond-lily blossom. Graceful water jets form a fountain, which is the central feature. Grass paths intersect the grounds.



The Wood Path



The Central Path Viewed from the Loggia



The Tea House and the Steps Leading to the Upper Terrace

Manual Training in Public Schools

By Charles C. Johnson



THE task of learning how best to use one's hands has become a science. It is called manual training. Through it thousands of young people are finding out that there are within themselves possibilities of achievement of which they never dreamed. Within the last five years manual training has forged to the front with giant strides. Instead of being confined to technical institutions, it has become part of the everyday life in the schools of large cities. One result of this is that in thousands of homes there is evidence of surprising manual accomplishment, both decorative and useful. The ranks of shop and professional workers are annually receiving recruits from this source, of a far higher order of practical knowledge and ability to "do things" than has hitherto come to them in the form of beginners.

Manual training, as the school pupil enjoys it, does not develop the finished worker, nor is any such pretense made. What it does is to enable a pupil to find himself, and its chief purpose is really the formation of a partnership of head, hand, and heart. The aim of instruction in what is called constructive work is to give the individual power to work independently. Special effort is made to

times the making of original forms is permitted, although individual models must be directly related to the object model. Every effort is made to induce pupils to work out new forms at home, because their interest in the tasks in hand is measured largely by the home work they are willing to do. Later on, the attention of the pupils is taken up with basketry and weaving, tasks to which they seem to bring the best thought there is in them.

The general manual training course in the New York public schools extends over eight years, and includes drawing, construction, and shop work. The first two years most of the time is devoted to freehand representation of objects, simple illustrative drawings, constructive work with applications of



Evening High School Students
Modeling in Clay



A Carpentry Class Learning the Use of Tools

promote original creation and execution. Every new process is taught with a view of giving the ability to use the knowledge gained in the making of other forms.

Contrary to general opinion, first steps in manual training are not associated with shop work—carpentry or mechanics of any sort. In fact, the first three years the subjects of this course are construction, design, illustration, object drawing—all with the use of paper, splints, and pencil. Whenever possible, lessons in illustrative drawing supplement other lessons. In grade 2B in the manual training course of the New York public schools, for instance, the first step is to make objects from paper by cutting, folding, and pasting some form for furnishing a playhouse, such as an armchair or table. Some-

times the making of original forms is permitted, although individual models must be directly related to the object model. Every effort is made to induce pupils to work out new forms at home, because their interest in the tasks in hand is measured largely by the home work they are willing to do. Later on, the attention of the pupils is taken up with basketry and weaving, tasks to which they seem to bring the best thought there is in them.

The general manual training course in the New York public schools extends over eight years, and includes drawing, construction, and shop work. The first two years most of the time is devoted to freehand representation of objects, simple illustrative drawings, constructive work with applications of

decorative design, color, study of pictures. In the third year constructive work from drawings is added. The fourth and fifth year courses cover practically the same ground. The sixth year includes freehand drawing, memory or imaginative drawings, simple composition, principles of construction drawing, constructive work from patterns or working drawings, decorative design and its application, color, study of pictures and other works of art.

The seventh year course takes up freehand drawing, principles of perspective, memory or imaginative drawings, composition, construction drawing, principles of constructive design, ornament, decorative design and its application, color, study of pictures and other works of art. At this point, too, comes shop work, including the use and care of hack saw, plane, chisel, brace and bit; use of nails and screws; application of stains; making of simple, useful articles from individual plans; application of decoration; or, in schools without shops, constructive work from patterns or designs.



A Class in Basket Weaving

The last or eighth year in the course takes up the shop work, advanced exercises in chiseling and joinery, use of hand screws, cause of checking and warping; qualities of hard woods—oak, ash, etc.; nature and application of mortise and dovetail joint; characteristics of common woods; Venetian iron work, etc.

In the manual training high school, the first year's purely manual course consists of freehand drawing and joinery; English, including grammar, rhetoric, and composition. German, or French, or Latin and algebra are taught in connection with the manual work.

The second high school year includes plane geometry, freehand and mechanical drawing, wood turning, pattern making, molding and sheet metal work. In the third year are mechanical drawing and forging, while in the fourth year mechanical drawing is continued, and machine shop practice undertaken.

By the time a pupil is ready for a course in the manual training high school, his hands have become fairly skilled and fit to be trusted with the more serious work. As a matter of course he takes up mechanical drawing, but shop work is to an extent elective, so far as the particular variety in which the pupil shows the most interest is concerned.

By the time the pupil reaches the high school he has found himself to some extent, and is permitted by the instructor to give the major part of his time to the line of work that most appeals to him. This he follows out in connection with other tasks to as great an extent as the course permits. At the end he knows enough about the subject he has studied to decide intelligently if his life work lies in the direction pointed out by any of the manual arts. Even if he enters a profession, his manual training is a marked help to him. Every good surgeon is also a good mechanic.

The greater successes thus far attained by manual training pupils have been among those who attend the night or evening public schools. The course in these schools is intended for persons with whom the necessity of self-

support makes daily labor imperative. The only requirement for admission to the New York city schools of this nature is the ability to read and write English. As a rule these pupils have an idea of what they wish to learn. Usually it is in connection with the trades or professions which engage their daily attention, but often the menial laborer finds here an opportunity to mount the ladder leading to a higher rank in life. The popularity of this method of study is illustrated by the fact that a Brooklyn night manual training school has a list of 1,200 would-be pupils who await

the opportunity for study which will become available as pupils of the present retire.

Few boys lack the desire to "make things." In the development of this instinct to a point of usefulness, carpentry, perhaps, plays the most prominent part. It seems to arouse ambition more than any other line of effort, save that of electricity. With the development of the latter science has come an increase of juvenile interest in the subject.

At first the pupil in carpentry is taught the proper use of the plane, and what may be called edge work; that is, how to make the beveled edge, ornamental edge, and the overlapping and entering edges of joinery. It is here that the natural aptitude of the pupil is tested. If, for instance, he makes a small box in approved fashion, the chances are he can do other kinds of carpentry and joinery well. When he accomplishes such a result he is given more advanced bench work, in order that the extent of his natural bent may be demonstrated. Sometimes he excels in scroll work, or, again, in the working of Venetian iron.

Scroll work develops a steady hand and correct eye. The beginner is given patterns to work from, at first, but as he progresses he is urged to branch out more and more into individual design. In some cases the result is marvelous, espe-



Learning the Rudiments of Electricity

cially in the reproduction, without pattern, of leaves of trees. Technically, scroll work is known as fret sawing. Paper knives with fancy handles, paper racks, match boxes, and ornate, but still useful, baskets are constructed with the aid of the fret saw and glue pot. Not 30 per cent. of the pupils who

sorts, they know little of the working principles thereof. This fact is the basis of the newest departure in the manual training course in the New York schools. The pupils are taken by teachers in classes to the homes of the machinery used to supply heat, light, etc., in the school buildings themselves, and the working of this machinery is explained by the men in whose charge it has been placed.

In the machine shop work, and in the forge rooms, as much care is taken by the instructors in superintending the work as if the task in hand was being accomplished purely for commercial purposes. The result of this is that the training the



Young Pupils in Venetian Iron Work

take up scroll work in the school follow it afterward, but there are any number of homes that testify to the utility of the knowledge gained.

Applied mechanics are next in favor. This includes work in the machine shop or forge room. The constant supplanting of steam by electricity in manufactories is recognized in the method of equipping the manual training departments of the up-to-date public schools. This is noticeable in the absence of belting in the majority of machine shops. The individual motor furnishes the power. All these facts the pupil learns, as well as how to operate the electrical machinery. Indeed, in several instances the very dynamos used to generate the electricity that furnishes the motive power in the school shops have been constructed almost wholly by students.

Although most young people are familiar with the general appearance of boilers, pumps, and machinery of various

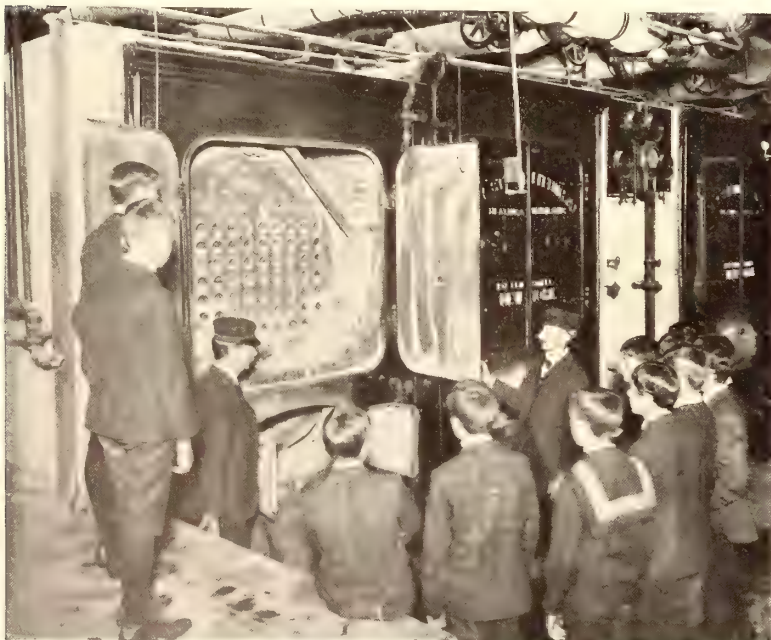


A Lesson in Scroll Work or Fret-sawing

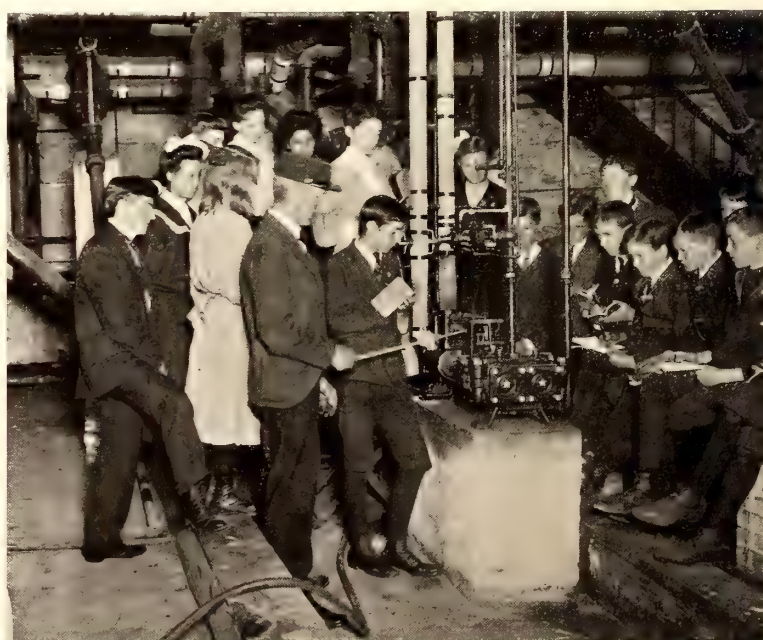
pupil receives is far superior to that ordinarily experienced by the apprentice.

It has been said of the present generation of working mechanics that it lacks thoroughness and a knowledge of the best application of principles. The chief aim of the manual training school is to remedy any such defect by thoroughly grounding the pupil in whatever line of mechanics he may elect.

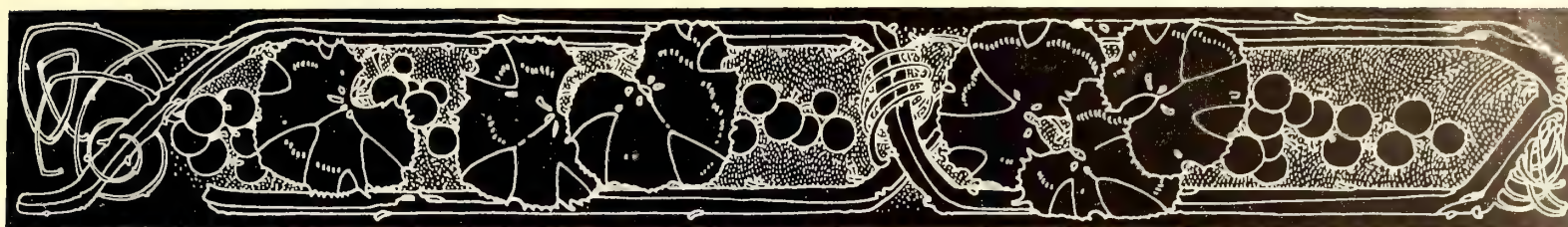
How well that ideal has been attained is testified to by the thousands of men and women who have been taught to use their hands and by the simpler and more beautiful objects of handicraft that are to be found in the homes even of the poor.



Learning the Principles of a Boiler's Operation



A Lesson in the Construction and Operation of a Pump



The Cult of the Orchid

By S. Leonard Bastin



HERE is surely nothing in the world's history which will quite compare with the orchid rage, which has taken gardening circles by storm at the present time. Only the tulip craze in Holland surpassed the present craze; but we may question if there was not more sordid money making at the bottom of that historic movement than wholesome love of tulip growing. But the orchid has not always enslaved the hearts of men; fifty years ago the great family had not attracted any large amount of attention, and, comparatively speaking, few of the varieties then known were in general cultivation. Now all this is altered and the corners of the earth are being ransacked for new species to satisfy the cravings of the great collectors.

After all it is no matter for great surprise that orchids have come into their present position in the popular regard. There is some subtle fascination about the whole group which almost every one feels. To begin with, their habits as plants are quite unlike any other members of the vegetable kingdom. They are found growing in all sorts of strange ways, and under a host of different conditions. Indeed it would be safe to say that there is no group of plants more widely dis-

tributed. And when one comes to orchid blossoms, they simply pass the bounds of the wildest imagination in the character of their colorings and designs. It would be useless to attempt to describe the extraordinary beauty of form in some varieties, the exquisite tinting of others, and the grotesque and quaint designs exhibited in such a number.

The fact that, generally speaking, it is not an easy plant to grow, has only seemed to add to the popularity of the orchid. True, some species are very much more accommodating than others, and are amenable to simple treatment; others, with the care which any lover of plants will gladly accord, may be grown with considerable success, while yet again, a certain number should be undertaken only if one is sure that the right conditions can be fully supplied. In the last category may be included the epiphytal species, which do not root in soil, but flourish on tree trunks in the hot, damp atmosphere of the tropical forests. To imitate these conditions a specially equipped glasshouse is absolutely essential, and, even with the advantage of every conceivable appliance, there are instances on record in which for some reason or other there has been poor success. Not that one would for a moment wish to discourage the small grower, or drive the amateur with



A Beautiful Spotted Variety of *Odontoglossum Crispum*



A Fine Pink Orchid Worth About One Hundred and Fifty Dollars

limited means to the conclusion that the cult of the orchid is only the pastime of the rich. Any one may grow orchids if he is careful to select those which he can manage, and to this end it is well to start the collection with the most ordinary



Catasetum Christyanum, the Bat Orchid

species, and thus gain experience. Apart from the pleasure of orchid-growing, there may be a very substantial profit attached to the cultivation of these plants.

The principal romance in connection with the cult of the orchid surrounds the collection of the plants in localities where they abound. The chief firms whose specialty is the supplying of orchids retain men at high salaries whose sole object is to obtain new and rare species for their employers. The life, although an attractive one to those of an adventurous turn of mind, is by no means without risk. Naturally, civilized and therefore fairly safe countries have been pretty well worked by orchid collectors, and there can be little hope of finding a great novelty except in out of the way parts. Here, surrounded by all the dangers of unexplored tropical lands, the orchid collector labors at his task. At every footstep some foul disease may dog his way; the human inhabitants of the land in which he is working may have strong cannibalistic tendencies, while all kinds of wild beasts and venomous snakes may at any time cause his death. Still this strange worker thinks that he is amply rewarded should he bring to light some new variety. As plants orchids are variable beyond all imaginings, and more often than not a fine natural "sport" or hybrid of some fairly well known kind will prove to be of more value than a new species.

As instancing some of the difficulties which are experienced by orchid collectors, the following extract taken from the letter of a French adventurer, who went in search of a particular species of orchid named *Eulophiella elisabethæ*. He says: "It was nearly a year before I discovered the gorgeous orchid. This plant grows in a very limited region only . . . and flourishes on the tops of the tallest trees. To secure the orchids I was obliged to have the trees cut down, and then I most carefully gathered all the plants myself." Later on, when speaking of the perils of the journey, which led right

into the interior of Madagascar, he says: "Not counting the constant exposure of my life, and the lives of those accompanying me, not only was our party exposed to the risk of being strangled by hostile and ferocious tribesmen—a fate that befell many a poor fellow belonging to our expedition whose unwary footsteps led him astray—but we had to struggle almost night and day against the wild animals which haunt these primeval forests."

It is probable that one of the most romantic stories of all is that told in connection with the Ladies' Slipper Orchid, *Cypripedium fairieanum*. About fifty years ago this plant, a native of the Eastern Himalayas, was quite a common and well-known species, selling at a dollar or less a plant. Strangely enough, in the course of time the exact locality of the species was quite lost sight of, and as its area was very restricted, the plant became practically extinct so far as the cultivation of it was concerned. It was known to exist somewhere in the northward of India, and several expeditions were got together, at considerable expense, to search for this *Cypripedium*. Owing to the extremely hostile nature of some of the tribes, several districts had to remain quite unvisited, and it was with a feeling akin to despair that the various firms at last came to the conclusion that it was useless to spend any more money on the quest. A few years ago, however, the British Government decided to open up once more some of the districts in the Eastern Himalayas, and to this end a strong expeditionary force was despatched, which speedily brought home to the natives the fact that no more rebellions would be tolerated. An enterprising collector, who was working Northern India, followed closely on the heels of the soldiers, with the result that one day he came upon the long lost orchid, growing in such profusion that it will scarcely be likely to become a rare species again.

Often and often the collector does not see the orchids



A Giant Orchid

which he is collecting in bloom, and can therefore have but little idea as to their real value. Nevertheless, he is careful to take large numbers of even the common kinds, or those which are apparently so at any rate. One man will forward

each year to the different centers in America and Europe enormous quantities of plants. It is at times a most difficult matter to get the newly collected orchids down to the coast after they have been wired into boxes by a skilful packer. Once aboard the steamer the risks are by no means at an



A Recently Imported but Undeveloped Example

end. Even in the well regulated temperature of a special cabin, a great many of the plants will perish on the way, and pass from their dormant condition into the sleep that knows no waking. Many thousands of dollars will be lost in this fashion on every consignment of orchids. But supposing that the shipment in its entirety comes more or less safely to hand, the importer goes carefully through the uninteresting looking roots. Of course any that he suspects may be something special he places aside, but the majority, which will be examples of common species, he will place aside for entry in the next possible auction sale. Now these may be simple types, or they may not. Illustrative of this, let us consider an actual instance, which occurred not so very long ago in London. A big firm placed some of their outcast orchids on sale, and a number of these lots averaged not more than half a dollar apiece. One amateur grower went in for half a

dozen or so of these, and after tending them for two or three years they all bloomed. What was the owner's surprise and delight when he observed that one of his treasures was a unique variety—quite a gem in fact! Most strange of all, he hies him to the firm which had originally spurned the plant, and which had gladly accepted a modest sum minus the auctioneer's commission. They in turn are so struck with the novelty that they at once offer to buy the specimen back again, and after a good deal of bargaining the price is fixed at a sum equalling two thousand five hundred dollars. The record price for an orchid plant, however, was considerably more than this, and was attained in March, 1906. In this month a variety of *Odontoglossum crispum* changed hands at the enormous sum of one thousand one hundred and fifty English guineas, about \$5,750. By courtesy of Mr. J. Seel, we are enabled to reproduce a photograph of this flower, which stands alone as the most costly plant on earth.

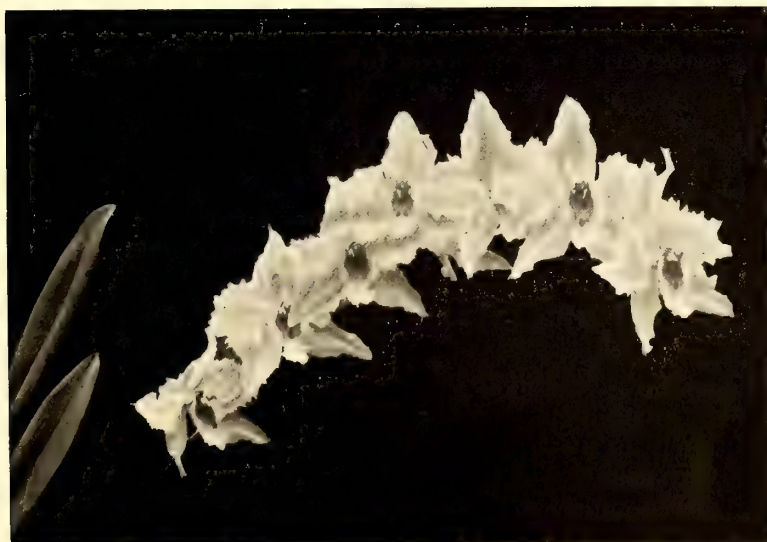
It is just here in this buying of plants freshly imported that the amateur cultivator would be likely to turn an interesting hobby to good account. The orchids as they appear when just to hand from their country of origin seem to be of little interest or value to any one. In its dormant state an orchid is principally a mass of brown and withered pseudobulbs, as the storage chambers of the plant are called. It is



Odontoglossum Crispum Pittianum, the Most Valuable Orchid in the World, Sold for \$5,750

only by skilful treatment that the plant can be induced to grow, when after a lapse of some time the specimen will blossom. If one were asked to point a finger to the particular kind of orchids in which the grower would be most likely to meet with salable varieties, one might mention the *Odontoglossums*, and specially the marvelously variable species known as *crispum*. New and striking forms of this orchid are in great demand at the moment, and if the variety be a "blotchy" one, provided the markings are fairly regular, the owner may consider that he is lucky. For the enlightenment of the uninitiated in the mysteries of orchid culture, it may be mentioned that the sole reason why the *O. crispum pittianum* referred to above fetched such a large sum was due to the fact that the flower was more freely marked than any other that had come to light previously.

The artificial cross-fertilization by means of insects is a matter which, at the present time, is receiving a great deal of attention. The process is well known, and all must be familiar with the manner in which the pollen from one flower is transferred to the feminine organs of another bloom, in the hope of affecting the resulting seed. It is a slow business, the raising of orchids from seed, and one requiring an immense amount of patience. As in the case of all kinds of plants the outcome is exceedingly uncertain, and more often than not woefully disappoints the experimenter. Still, good



A Fine Type of Natural Hybrid *Odontoglossum Crispum*

A Group of Rare *Odontoglossums*A Particularly Fine Specimen of *Miltonia Vescilaria*

work is now being done in this direction, and there can be small doubt that fine forms will be brought to light.

It is an utter impossibility within the limits of a descriptive article to give anything more than the most general hints as to the cultivation of such an immense group as the orchids. In a broad sense the general treatment should consist in keeping up the periods of rest and activity natural to each variety, and rigidly observing these whatever the plant may seem inclined to do. When passing into its dormant condition the specimen will naturally demand a great slackening in the water supply, and with the return of active growth the amount of moisture must needs be increased. The beginner is, no doubt, wise if in the first instance he accustoms himself to the growing of fully established specimens. The newly imported

examples call for a considerable amount of attention if they are to be successfully started. As soon as received all old leaves must be removed from the pseudobulbs, and the plants placed just as they are in the shady part of a cool house. Here they should be allowed to remain for two or three days, the atmospheric moisture being all sufficient for their needs. After the lapse of the stated period the plants may be potted and nursed until they start into growth. Of course even the most careful grower will lose a number of his plants at times, and one can in nowise be sure of the fate of a specimen until it has been fully established. Still, orchids are such eccentric things that the amateur often rejoices in the "beginner's luck," which falls to his share, while the old hand is mourning the loss of many treasures.

The Interior Color of Walls



COLOR is the quality which gives agreeableness to walls. The pattern of the covering material is a matter of the primest importance; but a good pattern may be ruined by a bad coloring. The importance of color is, therefore, supreme. It is not only the first step toward making the room agreeable, but it is the decisive step. Once fix the color of the walls, and it will be impossible to avoid the chosen tint if an harmonious ensemble is to be obtained.

The selection of the colors for a series of rooms is a matter dependent on many circumstances. Professional decorators are apt to view the subject by rule of thumb, and glibly give advice as to the best colors to use in north rooms, south rooms, well-lighted rooms, dark rooms, rooms for men and rooms for women. For one who has no idea what to do such advice is very heartening, no doubt, but it entirely ignores the personal element which, after all, is one of the most important things in the decoration of the house.

One good general rule lays at the foundation of all interior color schemes, and that is that the first thing to be considered in choosing the color of a room is the quantity of light within it. Rooms lighted from the north, for example, are very differently lighted than those facing the south, even if the amount of opening surface be identical. Warm, bright colors are suited to north rooms, cool soft tints to south rooms. That is to say, warm reds, golden browns, and golds are colors for north rooms, while blues, water greens, and silvery hues are adapted to south rooms. The whole phi-

losophy of household color schemes is summed up in these differences.

Within the limitations thus set there is wide scope for individual treatment. The home maker, intent on arranging her color schemes, may now draw on her individual preferences and choose the colors she likes best, always keeping in view the basic conditions set by the quality of illumination. If one is completely at sea—and a good color sense is by no means so common as many suppose—it will be necessary to depend on professional advice, a very good thing in itself, but its following takes away much of the individuality which comes from personal choice and direction. The color of a wall, however, is too important to experiment with, for, once chosen, it is apt to be retained until the end.

There is still another very important matter to be considered, and that is the relationship of the colors of various rooms to the immediately adjoining apartments. The tendency of the modern American interior is to be as open as possible, the rooms often not separated at all, but connected with spacious openings. This is particularly true of the modern hall which is apt to be a central apartment into which all the others open.

The single final rule to be observed is that of harmony, absolute, general, perfect. There must be no discordant notes. There must be no clashing of tints and tones. There must be no sudden changes. There must, in short, be a harmony that can be seen and be felt. It is impossible to generalize farther; but this, the most difficult task of all, is the wall decorator's supreme test.

The Revival of Artistic Hand-Wrought Iron Work

A Unique Village Craft in England

By Frederick Bottal



THE progress of science and the development of machinery has brought about a sad decadence in an artistic type of home decoration and embellishment which in the Middle Ages had an extensive vogue in Europe. This is the industry of artistic hand-wrought iron work. Specimens of this work, which unfortunately have now become very rare, may be seen in the old-world buildings, both public and private, which have stood the storm of centuries in European countries, and which are now highly prized by their owners. In fact, so rarely are examples of the work brought upon the market that high values are realized. It was only recently that a well-known English admirer of this handicraft purchased a pair of gates executed in the sixteenth century for the sum of \$30,000. Indeed, some of the prices realized for typical examples of this medieval handiwork have been most fabulous, owing to the limit of the supply. The majority of the remaining examples are now public property, and consequently, being in the hands of the respective governments, will now be impossible of acquisition by the amateur.

The industry received its death blow from the advent of mechanical methods of producing the work, both more expeditiously and cheaply, albeit not so artistically or thoroughly. True, there are still in existence a certain number of foundries or smithies where the art is practised, scattered throughout France, Belgium, Spain, and Italy, but the art is rapidly becoming a lost one, the present workers not possessing the skill or artistic taste of their forefathers, who were bred, born, lived, and died in the atmosphere and amid the surroundings of the handicraft. In Great Britain, especially, where two or three centuries ago there flourished numerous villages and centers where the art was practised, the workers lost their skill and taste for the craft, with the result that the industry soon became quite extinct.

Within recent years, however, there has been manifested a revival of the handiwork, enthusiastically fostered by the King and several members of the aristocracy, with the result

that there has arisen a new demand for this type of decoration. This revival is attributable to the energies of a lady, Mrs. Edith Ames-Lyde, the Lady of the Manor of Thornham. She has so succeeded in imbuing the natives of the village with a taste for the work that a flourishing industry has been created.

The village of Thornham is quite removed from the hum and bustle of the manufacturing centers, situated as it is in



Entrance Gates Made for the Countess of Warwick

the agricultural county of Norfolk with the nearest township some five miles distant. It is an old-world village, characteristic of the remote parts of England. With its old-fashioned houses, and its single straggling, dreary village street, and its



A Polished Black Iron Casket Made for Lady Rothschild



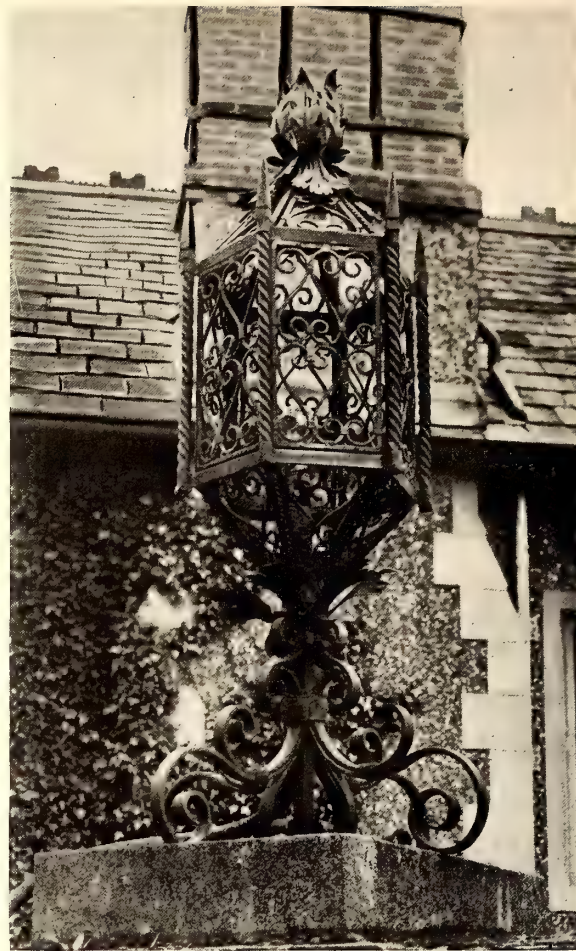
Gates with Top Sections Executed in Carnations and Other Flowers



An Artistic Lantern of Wrought Iron



A Well-executed Bell Pull



Lantern for the Prince of Wales. Sandringham

atmosphere of solitude and quiet, it is strongly reminiscent of Washington Irving's *Sleepy Hollow*.

The industry, which now constitutes the most important in the neighborhood, has grown from a humble beginning. In order to while away the tedium of the long winter evenings,

Mrs. Ames-Lyde engaged a lecturer to visit the village, and give a little instruction to the lads in the very ordinary and simple bent iron work. The lady herself, who is thoroughly conversant with artistic iron work as practised on the European continent, assisted in the inculcation, and secured the



Wrought-iron Gates at Sandringham



A Tastefully Designed Candelabrum

co-operation of the village schoolmaster in her efforts. The youths developed an unexpected aptitude and desire for the work, the fascination and possibilities of which they quickly realized. In order to foster this enterprise a small building was secured, in which a forge and the necessary implements of

VII was among the first to recognize the value of the enterprise, and one of the first contracts the Thornham artists undertook for the reigning sovereign was a swinging lamp for the hall at Sandringham. This specimen aroused such widespread interest on account of its workmanship and beauty of design that a replica was ordered for the Paris Exhibition of 1900. The late Queen Victoria was also deeply interested in the art, and a beautiful imperial lamp, the floriation of which is emblematic of empire, was specially prepared for her. The whole of the work was carried out by hand, and the decoration was of a most intricate and difficult nature, comprising the delicate combination of roses, thistles, and shamrocks with the lotus flower of Egypt.



Garden Gates for Lady Maple

the trade were installed. The students soon became expert in simple bent iron work, and attempted the execution of better articles, fashioned upon their own artistic lines, or copied masterpieces of this craft executed in the middle centuries.

As the work progressed it aroused the interest of architects and designers, who, although demanding such hand-wrought art iron work for various forms of embellishment, had either to send their designs to the continental workers, or be satisfied with the more mechanical machine work. King Edward



Polished Iron Hinges for Mrs. Berkeley, Hanwell Castle

This unique work is carried out in an ordinary village cottage secured for the purpose, and the interior of which has been adapted to the requirements of the industry. The stranger's attention is arrested by a large design placed over the door executed by the workers, and which is a replica from the Cathedral at Lucca, while projecting from the building into the street is a swinging sign representing the sons of Tubal Cain. The workshop is a smithy purely and simply. Of machines there are none, with the exception of a driller. The whole of the work is produced by hammer and anvil, a great part of it being undertaken in cold iron.

The workers are drawn from the village school, and commence operations directly their scholastic curriculum is completed. The lads are initiated into the art by the schoolmaster, who is responsible for the greater part of the designs, a large majority of which are quite original in character, though there is an extensive collection drawn from all parts of the Continent. Should the youth evince no prominent sign of artistic creation, he is then taught the usual trend of iron smiths' work.

A large amount of work is carried out by the workers for architects, designers, and artists.



Top Central Section of Gateway Ornamented With Iron Carnations; Each Petal Was Wrought Separately and Then Welded Into Position

The Japanese Morning Glory

By Ida D. Bennett



WITH most varieties of plants, the Japanese are much given to the growing of the morning glory in pots, and there are certain dwarf forms that are only suitable for this form of culture. Most of the named varieties have also a dwarf form, or are rendered dwarf by certain methods of culture.

The plants may be readily dwarfed by planting in shallow seed flats and growing on until they bud, which will be in four or five weeks, and when thus forced they do not regain their normal stature when planted out in the open ground or in pots, but continue to bloom while remaining but a few inches in height. I know of nothing that equals the little dwarfed morning glories in precocity, except the little Multiflora roses which we bring into full bloom from the seed in seven weeks.

The Aurata, as its name indicates, has golden foliage which harmonizes exquisitely with flowers of blue, of steel-gray, and gray bordered with white, feathered down on the ground of the gray more than appears in flowers of other colors. There is a great diversity in the shape and coloring of the foliage of the different varieties, one variety showing a long, narrow, curiously crumpled leaf, with heavy stems covered with reddish hairs, others showing enormous leaves splashed with gray and white, looking much as though whitewash had been spilled upon them from above; these variegated varieties would be very ornamental even without the flowers.

Antigone belongs to this ornamental variety; the leaves are medium-sized, but beautifully mottled with gray and white, and showing large china-blue flowers of a wonderful purity of color.

Aglaja, another variegated-leaved variety, shows flowers of white splashed and speckled with blue, with an occasional speck of crimson, the throat showing a tendency to cream color.

Adonis, one of the largest variegated-leaved varieties, shows immense flowers, more or less flared and ruffled on the edges, of white splashed and speckled with crimson—a very lovely flower.

Most varieties of the morning glory show several shades or variations of the same color, as Asteria, which gives several shades of red or smoke color, the latter a very novel and striking color quite unique in flowers.

The best of the red shades is a deep velvety crimson, quite unlike anything one is accustomed to associate with morning glories, but we are talking of Japan, the country of necromancy and the things thereof, and shall we be surprised?

One of the finest of all morning glories is the pure white Thalia. This is really magnificent. The plant is of very vigorous growth, easily covering sixty square feet of netting by midsummer and bearing its great, white blossoms in clusters of five or more. Like all Japanese morning glories it blossoms from the ground up, and its blossoms range from immense lily-like trumpets to frilled and Japanesque effects that are fairly ravishing.

One of the more ordinary forms of Japanese morning glories, and one more apt to be found in the ordinary mixture of seeds, is Euphrosyne, an immense flower of a fine red bordered with a broad band of white. This variety also gives some plain reds with an occasional frilled effect.

Collata, a fine dark blue, shows also the white border and white speckled with blue.

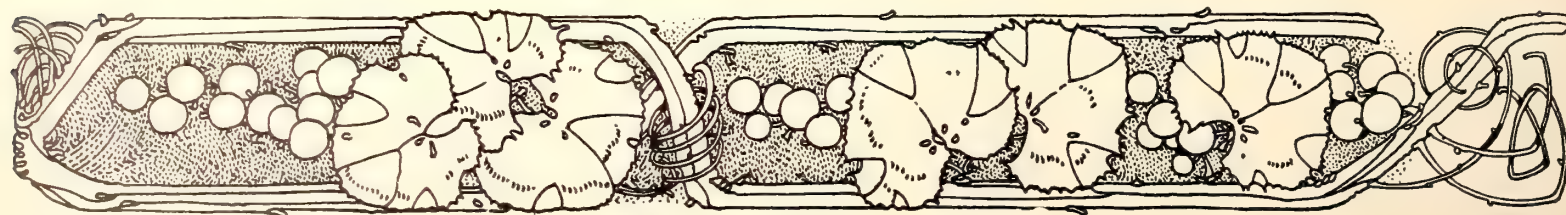
The culture of the Japanese morning glory, to produce the best results, should be high. Seed should be started early in the house or hotbeds, and the plants removed to the open ground when all danger of frost is passed and the nights are warm. Few, if any, vines will do much until the ground and nights are warm, and a setback at the beginning means inferior results all summer. Before sowing the seed, either in the house, hotbed, or open ground, they should be soaked in hot water for several hours, or until the seeds are swollen and cracked. I often defer sowing seeds until they are actually sprouted, in this way insuring the germination of the seed, and knowing just how far apart they will be needed.

Very rich mellow soil is required for the Japanese morning glory, and an abundance of water. The Japanese water these plants twice or three times a day, and it is safe to say that too much can hardly be given; certain it is that they should never be allowed to dry out. The value of an abundant water supply may be readily demonstrated by letting them dry out for a few days, when the blossoms will be seen to greatly decrease in size; then, if a very thorough watering be given, the flowers, on the following day, will be found to have nearly doubled in size. Where there is a water system good results may be obtained by running a pipe or hose into the bed, and letting a small stream trickle continuously through it.

Liquid manure should be given once a week after the blooming season commences, but not before, and as the Japanese morning glory branches freely from the base of the plant, it will be necessary to prune back a portion of this growth so as to restrict it and induce more flowers.

The Japanese morning glory requires many times the wall space the common morning glory does and should be planted for best results not more than five feet apart, or rather near; they also require height as well as breadth of space, and unless this is provided the results will not be satisfactory, as, when they have reached the top of the low trellis or building, the tops will droop down over the lower growth and hide it, and, as the plants blossom from the base up, most of the bloom will be obscured.

The best location for the morning glory is on the west side of a building, the next best the north. Planted on the east or south of a structure, the early morning sun will close the blossoms before one has a chance to enjoy their beauties, unless they form the habit of early rising to worship at the morning glory's shrine. Planted on the west and north they will remain in full beauty the greater part of the forenoon and often all day. In any event, when successfully grown the Japanese morning glory gives many pleasures.



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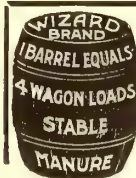
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FEBRUARY GARDEN NOTES

By Eben E. Rexford

WHILE it is too early in the season to do any actual work in the garden, it is not too early to plan the work which will soon be upon us with a rush. If it comes before we have made full preparation for it, quite likely a good deal of it will be slighted in the hurry of the moment.

There is no excuse for a poor garden under ordinary conditions. The average garden may be made a good one if the owner of it is willing to give it proper attention. This means thorough preparation of the soil for the reception of seed, the application of reliable fertilizers in liberal quantities, careful seed-sowing, and no quarter to weeds. This does not call for a great amount of labor or of time, and is not a matter of great expense.

Of course, many persons are so situated that the little piece of ground they call a garden is hardly equal to the dignity of the title bestowed upon it, but it is a great deal better than no garden at all. Those who have nothing but a little back yard often fail to do anything with it because of its insignificance, and the unfavorable conditions which generally prevail there. The ground is always willing to do its share of work as best it can, and plants are always willing to do their share if given half a chance, and, if we are willing to do what we can to help matters along, the most unpromising back yard may be made something more than a mere apology for a garden. Anyway, it "pays" to clean it up once a year if nothing is planted in it. But don't let the matter end with the annual cleaning up. Spade up the soil. Turn it up to the sunshine—if there happens to be any—and let that and the air sweeten, and purify, and mellow it. Add something that has the elements of plant-growth in it, and work it over and over until it is as fine as it can be made. Then plant something in it. It may be vegetables, or it may be flowers, but make the attempt to grow something. You may not succeed in growing anything that you would care to enter for a prize at an agricultural fair, but you can grow really good specimens of vegetables and flowers in places where few persons would look for favorable results. The average back yard is a most forbidding place, so far as appearances go, but it is possible to make it attractive and even profitable.

Those who can have "a real garden," and who have other work to take up most of their time, ought to plan for economizing labor in it. Do not lay it out in little narrow beds, as we have been in the habit of doing, but plant it in rows. This will enable you to make good use of the wheel-hoe and cultivator. Let the rows run the entire length of the garden, that the turns made in cultivating may be as few as possible.

Plan to get all possible benefit of the sunshine. This you can do by planting tall-growing plants, like corn, pole-beans, and climbing peas, at the north. Graduate your plants according to their habit of growth, toward the south, so that all of them may have an equal chance at the warmth of the sun.

If you propose to set out such plants as asparagus or rhubarb, which require permanent quarters, put them at one side where they will not interfere with the proper cultivation of annual plants. Locate them where they can be cared for well, of course, but keep them out of that part of the garden which must be spaded or plowed up each season.

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to the location of small fruits, like the cur-
rant, and the gooseberry, and the grape. These
should be given a place in all gardens, if pos-
sible to do so, but they should be kept entirely
apart from all one-season plants.

What vegetables should the beginner in
gardening to attempt the cultivation of? That
would depend largely on the garden. If of
sufficient size to warrant it, plant all the
standard sorts, in small quantities. Do this
as an experiment, with a view to finding out
what the place is best adapted for. Some will
fail, perhaps. Some will reward your efforts
with a bountiful crop. Next season you will
know more about your garden than you do
this, and each season thereafter the element of
experiment will give place to a certainty born
of intelligent observation, and a growing
knowledge of conditions which every gardener
has to find out for himself.

If the garden is a small one, I would advise
its owner to confine his selection of varieties
to such sorts as require but little room and
are generous in development, like lettuce,
for instance, which produces large quantities
on a tiny bit of ground; or radishes, which
do not ask for much room; or early onions,
which can stand thick in the row. A con-
sultation of the catalogues of the seedsmen
will enable you to select kinds which seem
best adapted to a concentrated form of
gardening.

But don't attempt to grow radishes, lettuce,
or any other vegetable which must make quick
development in order to be satisfactory, in a
shady location, or on soil that will not re-
spond promptly. These plants must be given
a soil that is light, mellow, and warm, and it
must be so rich that they go rapidly ahead,
after once getting a start. Success depends
on rapid and steady development, and this
can only come about by making conditions
favorable.

Spinach, beets, and other vegetables used
as "greens," can be grown in fair quantities
on a small piece of ground. Indeed, those
having good-sized gardens will hardly care to
devote much space to their cultivation, for
they must be used while young and tender,
and large beds of them would grow many
more than the ordinary family would care
to use.

A correspondent writes: "I am a green-
horn at gardening. I want to plant quite a
good many vegetables, however, but I don't
know what varieties to get. The catalogues
describe so many—all said to be superior to
everything else—that I get bewildered in try-
ing to make a choice. Help me out, please."

My advice is this: Read the catalogues over
carefully, not one catalogue, but several,
and you will find that all of them describe
certain varieties of vegetables in common;
that is, sorts whose merits are so pronounced
that all dealers are obliged to supply them to
meet the yearly demand. Each dealer will
be pretty sure to have very flattering things to
say about special varieties which he controls,
but all will admit the value of certain stand-
ard varieties. These are the kinds the garden-
ing public depends on, and these are the kinds
the amateur gardener will do well to con-
fine his selection to. They are standbys.
The special kinds which the dealers call your
attention to with such lavish use of adjectives,
mostly in the superlative degree, may be quite
as good as the old standard sorts—possibly
better—but that remains to be proved. You
will be wise in choosing the kinds about
whose merits there is no doubt.

It is the same with flowers. Each year the
dealers make a great flourish of verbal
trumpets over their "novelties." Because so



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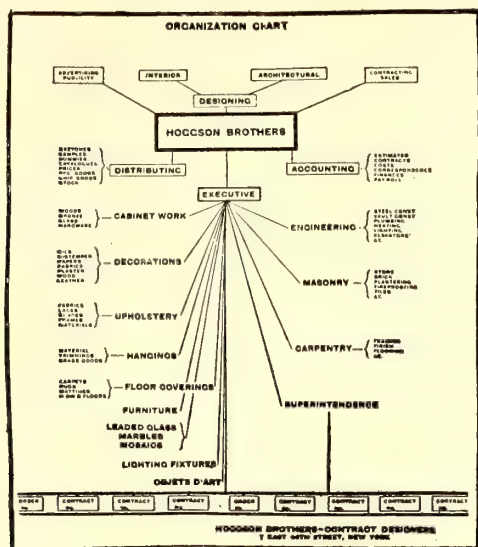
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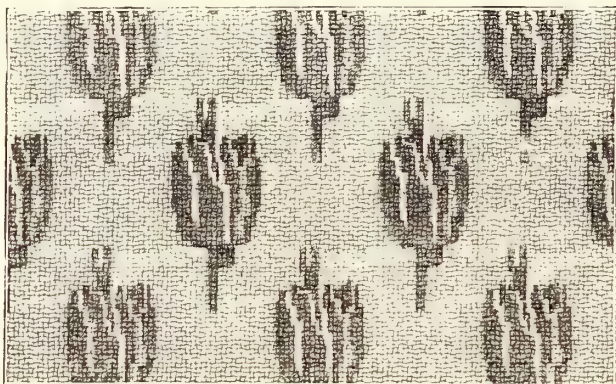
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much is said about them, the amateur is given the impression that these are the very things she ought to buy. This is not the case. These are the things for her to let alone until some one else, who can afford to experiment with them, has proved them meritorious. Then, if she sees fit to do so, she can add them to her list, but now her attention should be concentrated on plants about whose merits there can be no question—the good old kinds which have done splendid duty for a generation or more, and which will continue to be grown after ninety-nine out of every hundred "novelties" have passed into the oblivion of worthless plants.

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The plants in the window-garden ought to be blooming well now. Give weekly applications of fertilizer. Turn them at least once a week, to prevent them from being drawn so much to the light that there is danger of their becoming permanently one-sided. Shower them frequently. Three times a week is three times better than once a week. Six times a week is better still, in the living-room, where the air is hot and dry.

Keep all fading flowers cut off. Allow no dead or dying leaves to remain upon your plants. Never pick off these leaves and leave them on the soil or among the pots, as that is a sure means of encouraging and perpetuating disease. Burn them.

Stir the soil in the pot frequently. This prevents weeds from growing. It also allows air to get to the roots of the plants and facilitates evaporation, thus safe-guarding many plants against all danger of sour soil. Let in all the sunshine possible, and, along with it, plenty of fresh air.

HOW TO START EXTRA-EARLY VEGETABLES FOR HOME USE

By S. L. de Fabry

THE growing, or better, starting of early vegetables three to four weeks ahead of time is simple. An old soap box, a little rich soil, a sunny window corner, good seeds, and, still better, care, and the thing is accomplished. You don't need any greenhouse: a small table placed near the window in the kitchen or sitting-room will suffice to hold two boxes of the size of an ordinary soap box, and in them enough plants of a variety suited for the wants of an average family can be grown.

Two soap boxes are sawed in half, cross wise, so that the sides are from four to five inches high. Then the box is filled with rich garden soil, well mixed with about one-quarter of fine, well-rotted manure, and is ready now to receive the seed.

Good seed is of importance, and only reliable seed men should be patronized. Otherwise the care and labor will be lost. After the boxes are filled, the soil should be well watered with luke-warm water and the seeds planted while the soil is still moist.

Little furrows are drawn lengthwise with a piece of wood about two inches apart, the seed placed in them so they do not touch one another. The furrows are then lightly covered with soil, and the boxes are placed on a small

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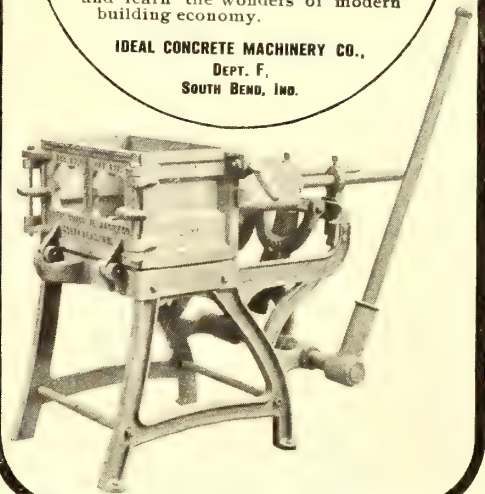
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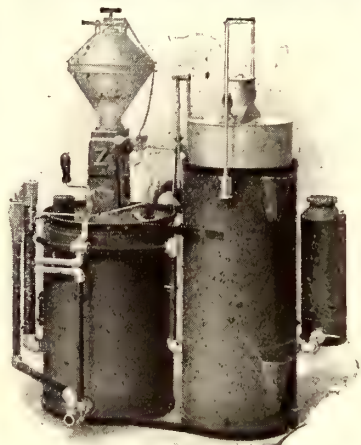
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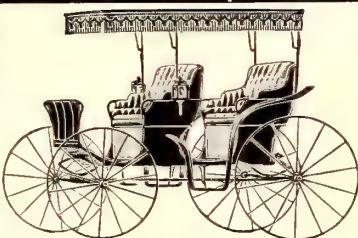
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table close to a window having the best sun exposure.

In country homes where only stoves are used, the kitchen is the best place, as the fire in the range is kept up generally day and night; in houses where steam or hot air is used for heating purposes any convenient room can be assigned, provided the temperature on cold nights does not fall too low.

The end of February, even the first week in March, is time enough to sow the seeds. Too early planting will advance some vegetables too far for successful replanting, besides it will weaken them if kept too long in the atmosphere of a living-room. As to the kind of seeds to be planted individual tastes have to be consulted.

Head lettuce, also romaine, tomatoes, early cabbage, eggplant, cauliflower, beets, kohlrabi, parsley, early celery, and the like, can be started in this way and safely transplanted later on. After the plants are well up they are thinned out from one-fourth to one-half an inch apart, leaving the strongest plants and removing the crowded weaklings. Lettuce, cabbage, cauliflower, kohlrabi, also parsley, can be transplanted in the open if two distinct leaves are grown on the plant.

Tomatoes, beets, eggplants, and celery should be transplanted first in new boxes, an inch apart, giving them more space to develop in. Before they are set out in the open, they will do better if their tops are cut off.

Even sweet corn, lima beans, canteloupe, and watermelon can be started early and then transplanted, but a different principle in sowing has to be followed. Good, solid sod is cut in squares about two inches in diameter and placed, not touching one another, on top of the soil in boxes as used for the other vegetables. Three to four seeds are placed in the center of the sod pieces and covered with about one-half an inch of soil. If the plants come up, the roots will grow into the sod; the plants can then be taken up at the proper time by handling them correctly. Of course, care must be taken to moisten the sod so that it does not fall apart, either by lifting it out of the box or setting it into the ground. Hardening the plants is necessary. This is done first by opening the window on clear, sunny, mild days at the noon hour, and is followed up later, at the end of March and during April, by taking the boxes outside in the sun on warm, mild days for a few hours.

Lettuce, cabbage, celery, parsley, cauliflower, and kohlrabi can be set out in the open in April if properly hardened. Tomatoes, eggplant, corn, lima beans, and melons can not be safely transplanted in the open before May 15th in the latitude of New York, even then they should be covered every night with an empty flower-pot, or its like, during the first week or two. Otherwise their growth will be retarded by the chilly night air or killed by a late, light frost.

In transplanting one rule prevails: press the soil firmly around the newly set-out plant so as to get the air out. Daily watering for the first few weeks, if the weather is dry, is necessary. The distance to set out each plant varies, but, taking for granted that the space is limited, the minimum distances are as follows:

Lettuce, eight inches each way; cabbage, cauliflower, one foot apart; tomatoes, corn, celery, bush or pole limas, two feet apart; beets, parsley, and kohlrabi, in rows about three inches apart; canteloupes, in hills four feet each way; watermelons, five feet each way.

It is well to understand that the ground where plants are to be set out must be properly prepared by plowing or spading over, and must be well pulverized with the rake or harrow. A liberal supply of well-rotted manure should be well worked in the soil, so that the tender

plants find nourishing surroundings and keep on growing. After they have taken root, a little nitrate of soda, purchasable at any seed store, spread around the stem of the plant and hoed in will work wonders. It is a quick-acting fertilizer, easily dissolved, and will show its enriching qualities by pushing the growth of the plant forward. Frequent hoeing and keeping the weeds out will be necessary if an early crop is looked for. Vegetables started this way will be ready for the table from three to four weeks earlier than if sown in the open.

THE OLD-FASHIONED HARDY GARDEN AND HOW TO PLANT IT

By Ida D. Bennett

LET us leave the gorgeous geranium and the ubiquitous canna and hie us back to the gardens of other days—our grandmother's garden, and evolve an old time sweetness of the things of the past, redolent with the sweetness of clove, pink and valerian and all the dear, old fashioned things that grew and bloomed when the world and love were young.

The sweet old gardens with their rows of tall, single hollyhocks and stately lilies; do we doubt that they were beautiful? then let us put on canvas, if we can, the gardens of yesterday and to-day and who would hesitate to choose between their gracious sweetness and the tawdry splendor of our beds of formal bedding plants, or what artist would care to paint them as a background for even a modern beauty?

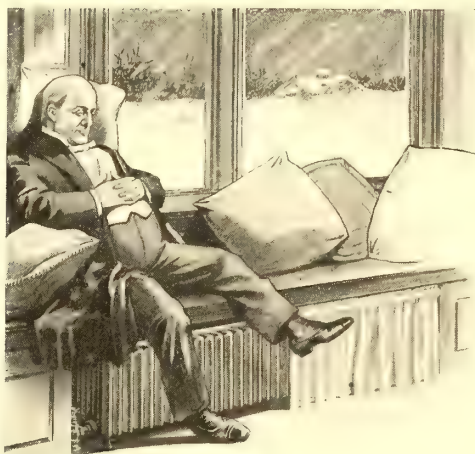
Let us have our bedding roses and geraniums, but somewhere, in some sequestered nook, let us have our sweet, informal gardens of old fashioned flowers.

The old fashioned hardy garden should be generous, for it is of a day when all things were on a generous scale, and land was not purchased by the square foot, but in generous slices of mother earth. Let it have its high, protecting wall or hedge, for we want to make this much of our gardens a part of our daily life, to be lived in and worked in free from the prying eye of the passing stranger. Or, if neither wall or hedge are available let there be a screen of vine-covered netting.

The garden—where there is ample space, should be planned from some central point, which should give tone to it; this may be an open bit of grassy lawn, or even a bit of lawn surrounding a wide spreading tree, that may, if ample enough, contain a tree house or seat or at least have its trunk surrounded with seats. Where there is no tree of sufficient beauty to excuse its presence, the open space may be provided with a garden table and seats, or even with a simple sun dial—something that will dominate the garden and make a central point from which the beds and paths may radiate.

And the old-fashioned garden calls for paths of ample width, for was not the old-fashioned garden of the days of the crinoline and pannier of wide graveled paths along whose trim-kept edges the sweet smelling cinnamon pinks or the formal box was trained? There is a certain charm in this use of the box as edging that appeals to one, but wherever used it should be kept primly trimmed and not allowed to grow beyond a certain fixed height. Perhaps the pinks will appeal to one's love of perfume and color more and they are certainly very charming when in their full florescence, but, unfortunately, this is a period of but a few weeks at most and during the remainder of the season the plants have only their bluish green foliage to recommend

For a June-like Winter



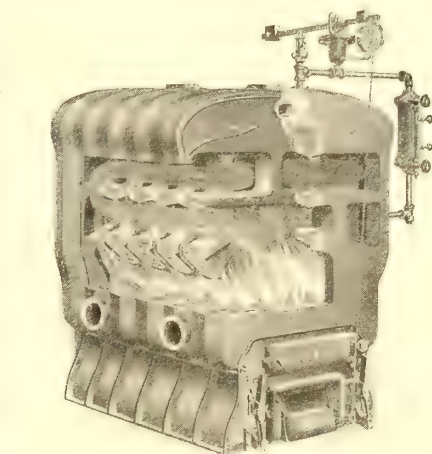
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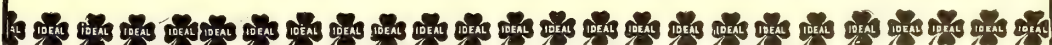


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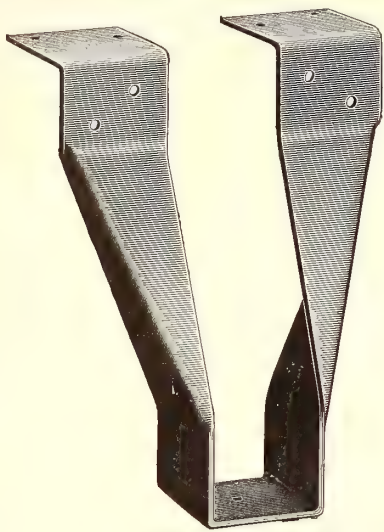
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them. They are, however, typical of the old-fashioned garden and of the easiest culture.

There is nothing arbitrary in the arrangement of the hardy garden. The paths may radiate from the central plat to the confines of the garden, the enclosing beds being narrow at the center and widening as they recede, or there may be a succession of circular paths connected with the main path or each other by short cross paths and the beds lying between these beds will be narrow and curved and lie parallel with the circling paths. This is a good arrangement if care is taken in planting to have the plants in the front beds of such low growth as will not shut off the view of the farther beds. If only two circling paths are marked out, with connecting paths, this will give four long curved beds in the first row and eight in the second row, with, if the plat be square, four corner beds,—ample space for a goodly assortment of old-fashioned treasures.

The straight paths, radiating from a common center, should be six or eight in number and will allow of as many beds within their boundaries. These will be narrow and pointed at the start, widening into wide plateaus at their base, and will afford excellent facilities for the planting of flowering shrubs in the rear, and will, perhaps, be found more desirable than the circling paths.

The hardy garden should enjoy a goodly amount of sunshine and be protected on the north and west from rough winds, as the plants must stand many and long, hard winters of driving sleet and snow.

Having planned and laid out the garden the question that naturally arises is—what to plant. With such an embarrassment of riches as the old-fashioned garden affords, there is no lack of material to choose from and much individual taste may be indulged in.

We have cited the low-growing, hardy pinks—the cinnamon and Her Majesty; these are especially desirable for edging the beds where it is not desired to obstruct the view of taller plants beyond. The effect of all borders is heightened if the same plant is used for all the beds, or if not more than two kinds, that will harmonize or contrast effectively, are alternated in adjoining beds. The Sweet William may be massed back of borders of pinks with good effect, and the garden heliotrope or valerian is another low-growing perennial that may be given a place near the front of a bed with good results. Then—taking the plants in the order of their height, there are the dielytras, lemon lilies, the stokesias—than which no better perennial is grown, the platycodons, heucheras, veronicas and the sweet rocket and the perennial poppies.

Larkspurs and foxgloves should form a colony by themselves and the peony be grown in generous quantities. Perennial phlox and lychnis, white lilies and all the wonderful sisterhood, with their scented chalices of coral and snow should stand in stately rows a-down the garden's path. Growing low along the edges of some of the beds should be found the old favorite—the polyanthus and the cowslips.

The liatris and asphodel, with its tall spikes of yellow, lily-like flowers and the snowy blossoms of the Anemone Japonica, that bloom when frost is in the air, and the spurred aquilegia that blooms in June must all be numbered among the garden's treasures, while in the rear the tall spikes of the monkshood and Campanula pyramidalis hold aloft their white and blue to the sky. Farther back the hollyhocks may stand sentinel over the garden's treasures and the tall bocconias and flowering shrubs complete the garden's roster.

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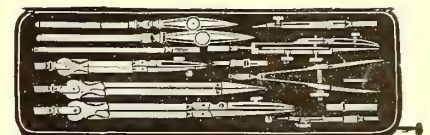
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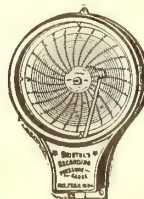
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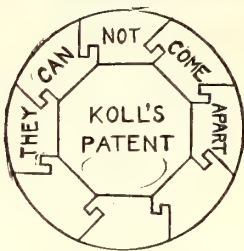
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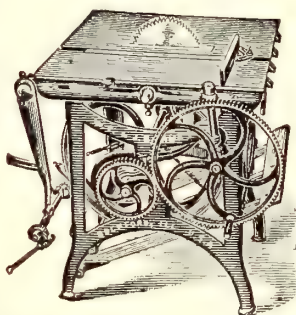
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will light up the garden in the dull days of November when all the other flowers have had their day and passed on, with their wealth of gold and crimson. These and the golden wallflower are of the autumn's treasures—her best gift to the garden's wealth.

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The barberry is an exceedingly beautiful shrub when laden with its large clusters of oval crimson fruit, which cling throughout the winter. The dogwoods strike a grateful color note through the dull days of winter, with the rich red, bright green and yellow of their bark and large clusters of bluish and cream-white berries. The golden osier, the Cornelian cherry and the strawberry bush are all valuable additions to this class for shrubberies and winter effects.



FRENCH POTTERY AND PORCELAIN. By Henri Frantz. New York. Charles Scribner's Sons. Pp. 9 + 177. Price, \$2.50 net.

The admirable Newnes' Library of the Applied Arts has a welcome addition in this interesting sketch of French pottery and porcelain. The scheme of this series of books has been more than once adverted to in *AMERICAN HOMES AND GARDENS*. It is, in short, to provide brief, yet complete monographs on various aspects of industrial art. Not a few of the subjects already treated are without representation in other books, and while the present subject is not new this presentation of it is not the less helpful to amateurs and collectors and not the less welcome.

French ceramic art dates no earlier than the fifteenth century, although it can scarcely be said to have begun before the sixteenth. It was, therefore, considerably behind other applied arts, and was notably later in development than the much more difficult arts of architecture and sculpture. Presently, however, the art made great progress, and French ceramics as a whole, constitute one of the most important chapters in the history of this beautiful art. The purpose of the author of the present volume has been to trace the main outlines of the story, and this he has done with sufficient fulness, notwithstanding the fact that his book is barely more than a sketch. But it is an admirable beginning to a fascinat-

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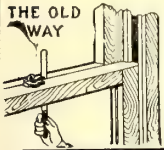
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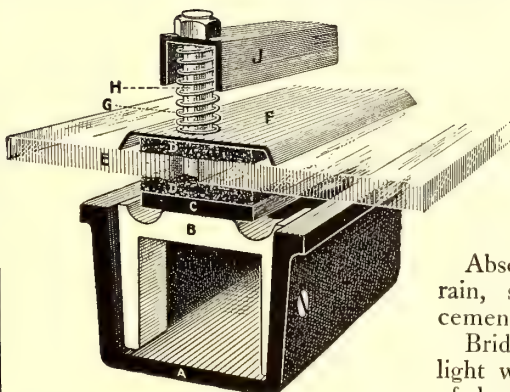
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ing topic which, within the limits that circumscribe the present study, is sufficiently developed.

Mr. Frantz comes down no later than the end of the eighteenth century in his survey, with the exception of Sevres. The limitation is perhaps a wise one, yet one could wish for a comprehensive survey of French pottery in the nineteenth century as well. The book is abundantly illustrated, both with reproductions of photographs and with colored plates. Both classes of illustrations are admirable in the fullest sense of the word, reproducing objects of real interest and value in themselves, examples of the best sorts of their respective kind, and printed in fine style, the half-tones being remarkably distinct, and the color reproductions of unusual beauty. Nothing, in short, has been left undone to make this book helpful and useful. It is, indeed, a welcome volume.

THE MODERN HOME. A Book of British Domestic Architecture for Moderate Incomes. Edited by Walter Shaw Sparrow. New York. A. C. Armstrong & Son.

This beautiful illustrated book will be hailed with welcome by all fortunate enough to possess it. It is charming in every respect, in typography, in make-up, in kind of illustrations and in the manner in which they are reproduced. It is a book not only of houses, but of interiors, of craftwork and the best sorts of interior decoration. It is, in short, an admirable handbook to the best domestic architecture of the present day.

Twenty years ago America was producing the most delightful country houses being built anywhere. They were charming and delightful structures for the designing of which our architects had developed a special cunning. Our architects are still doing good houses today but in the past couple of decades the hand of the Beaux-Arts practitioner and the fad of the Georgian have laid heavy hands on our domestic work, so that American houses, as a whole, do not exhibit that inherent charm once thought particularly their own.

Those who have watched the later developments of British domestic architecture have noted with surprise and delight the increased charm of picturesqueness and skill shown in the design of modern British houses. The enormous charm of many of these dwellings has long been well known to unprejudiced observers, and the present book will go far to broaden the knowledge of the excellence of this work. The houses illustrated in it are not only excellent examples of the very best contemporary English work, but as many of the illustrations are reproduced in color they appeal to the untechnical reader in a way that ordinary photographic illustrations do not. The book is, in truth, one that every one, even if his interest in building be of the slightest, will enjoy to the fullest.

An especial interest attaches to the book because of its avowed purpose of depicting houses for persons possessed of moderate incomes. This is a relative phrase that may mean a good deal and may be taken very literally. An examination of its plates and photographs would make it apparent that the moderate income in England must either be greater than the same thing in America, or else the editor's idea of moderate is something much more plentiful than the average reader imagines. This is the immediate fault of the book and a very notable one it is; but it is one that has been emphasized by the editor in the title he has chosen. Very many of these houses could not be built by persons of "moderate incomes" without seriously depleting their capital unless one were fortunate enough to inherit a sum of money to defray their cost.



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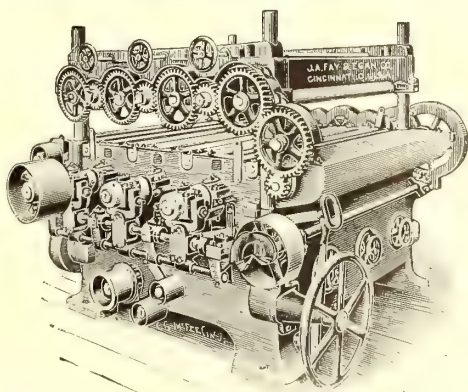
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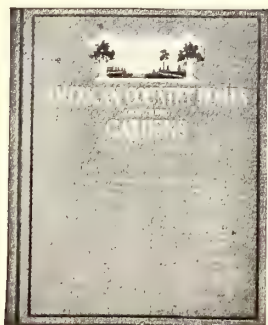
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In this respect the book is disappointing and grievously so, for the attractive quality of most of the houses is very great and most people would be thoroughly content with a moderate income could they but own one.

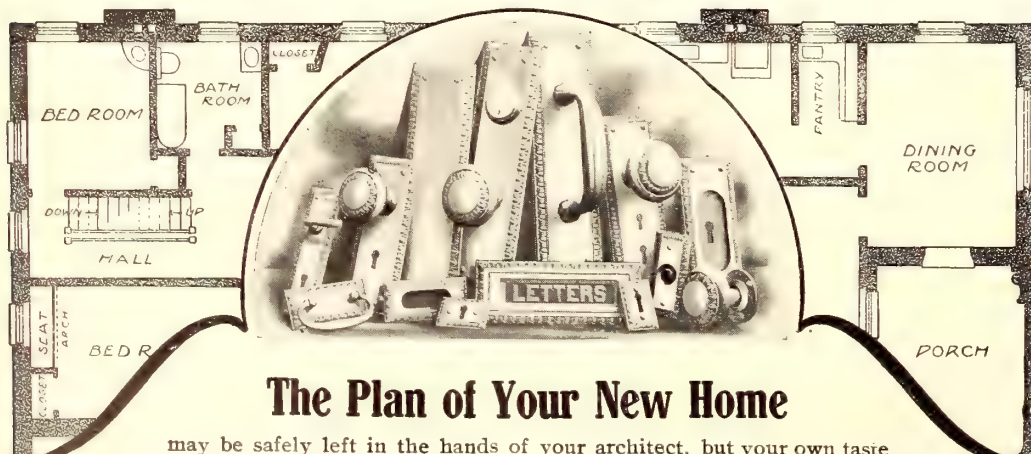
It emphasizes anew as it is being constantly emphasized in these days of high-priced materials and powerful labor unions that beautiful houses can only be obtained by liberal expenditures. In other words a good-looking house represents not only ingenuity and skill in design but large cost. And the cost is almost invariably proportionate to the size, a circumstance partly due to the inherent costliness of beauty, partly to the fact that those who desire beautiful houses are ready to pay the price.

Apart from this, however, the book can be read and studied with profit by every one interested in houses. The text consists of four chapters, "The Home from Outside," by W. H. Bidlake; "The Interior and its Furniture," by Halsey Ricardo; "Some Decorative Essentials," by John Cash, and "Sanitation," by the same architect. These gentlemen discuss their special topics with vigor and point; each has something to say and they say it in an attractive way. It is a book not only to be looked at, but to be read. It is brimful of helpful suggestions, of sane ideas, of excellent art. It is in many ways a notable contribution to the literature of contemporary domestic architecture.

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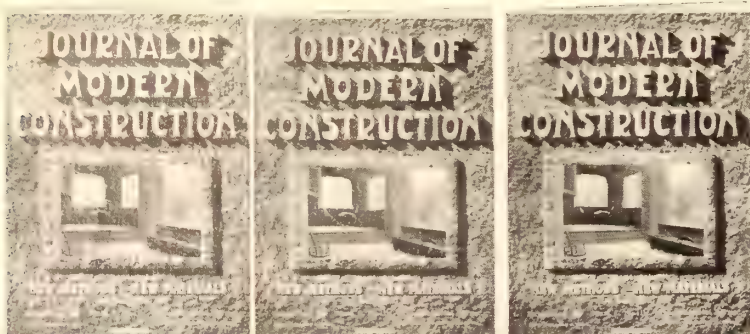
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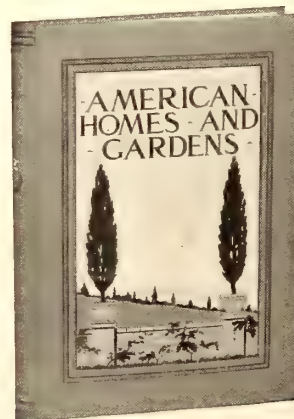
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French Methods of Denaturization constitute the subject of a good article published in *Scientific American Supplement* 1599.

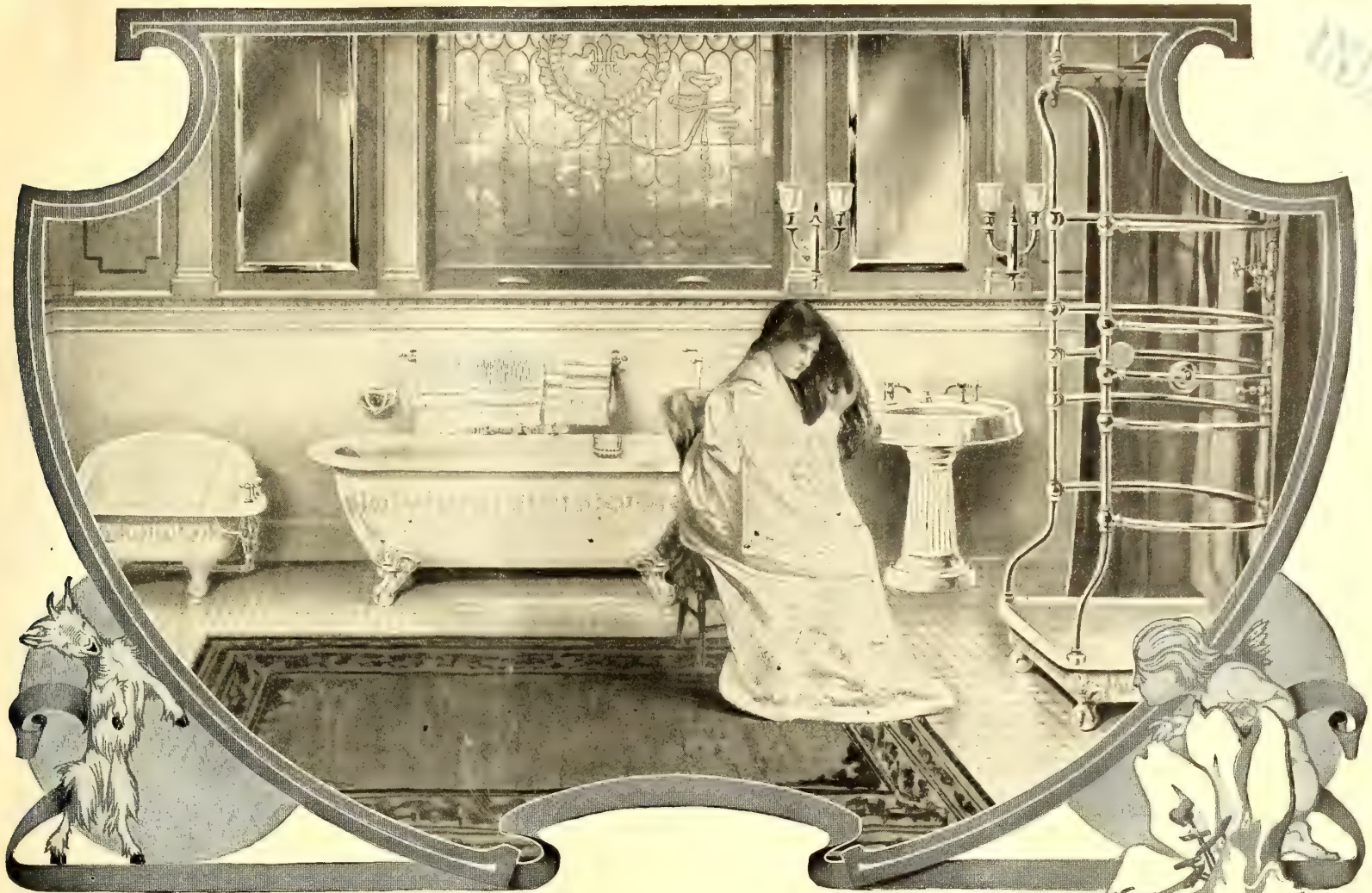
How Industrial Alcohol is Made and Used is told very fully and clearly in No. 3, Vol. 95, of the *Scientific American*.

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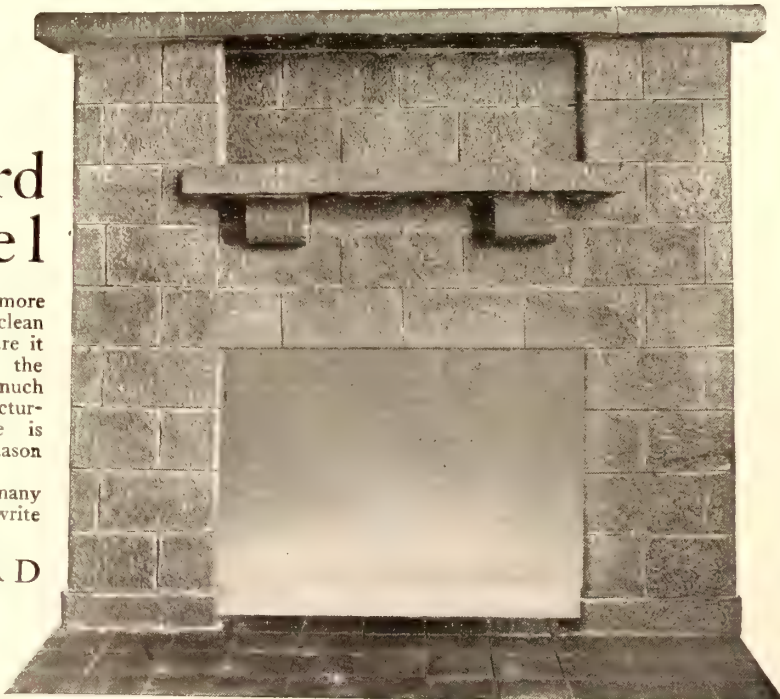
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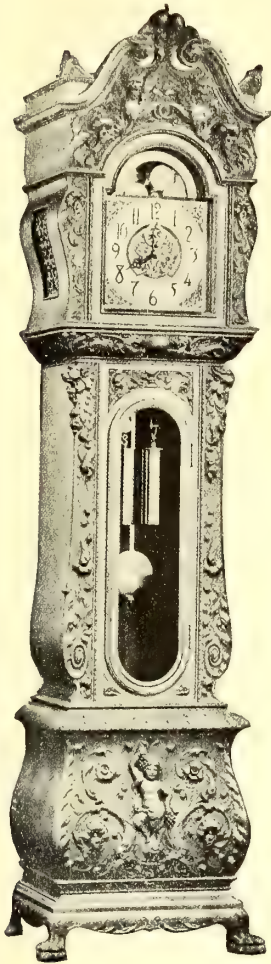
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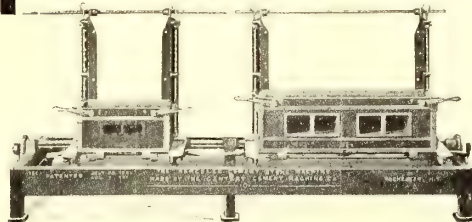
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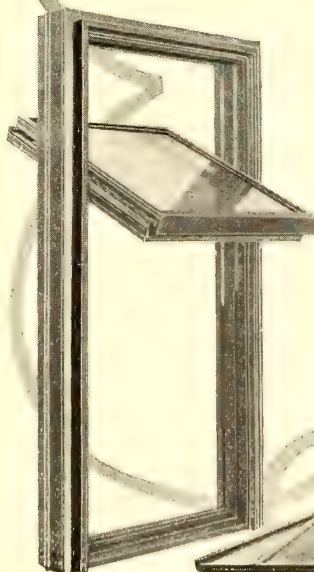
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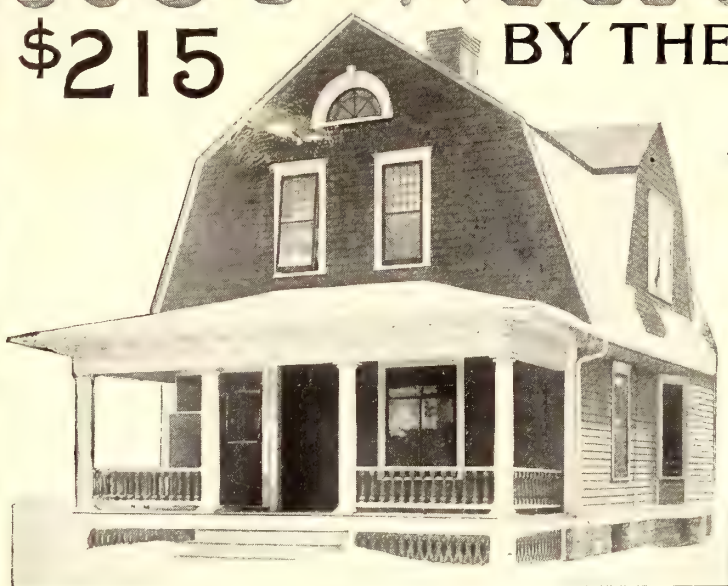
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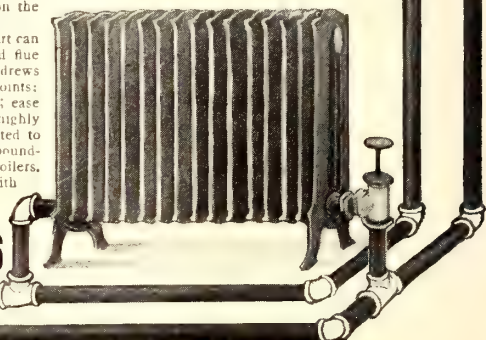
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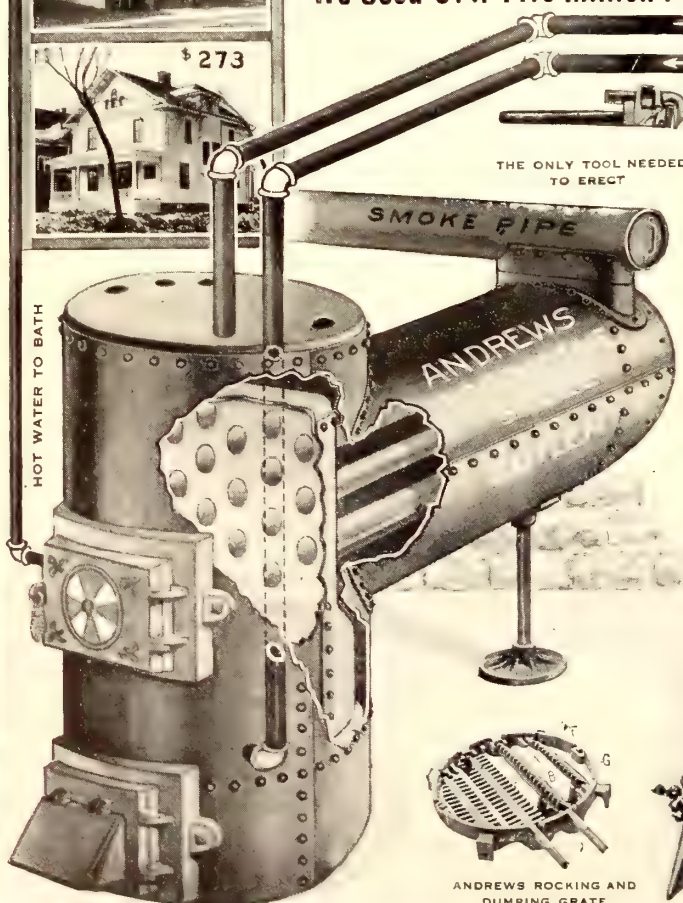
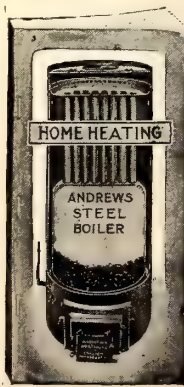
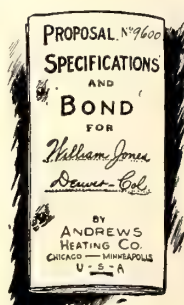
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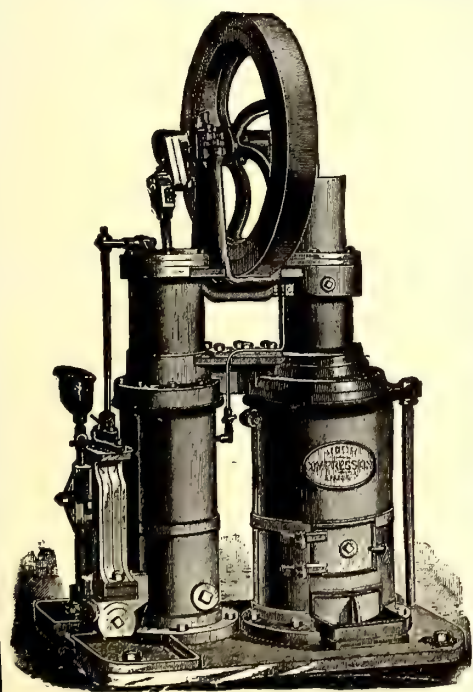
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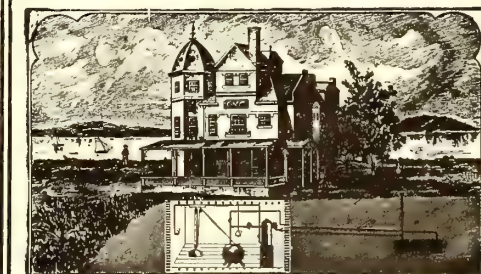
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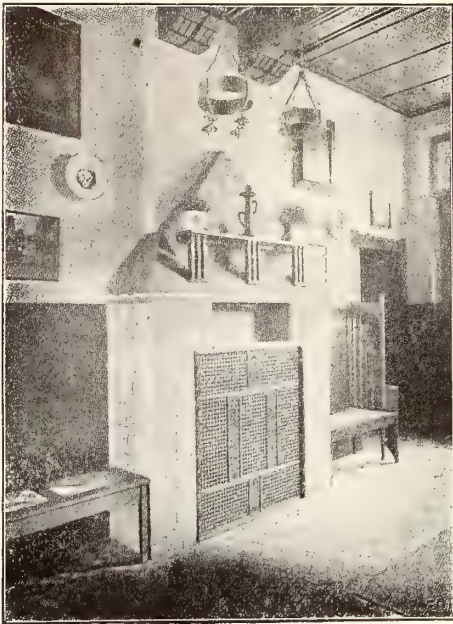
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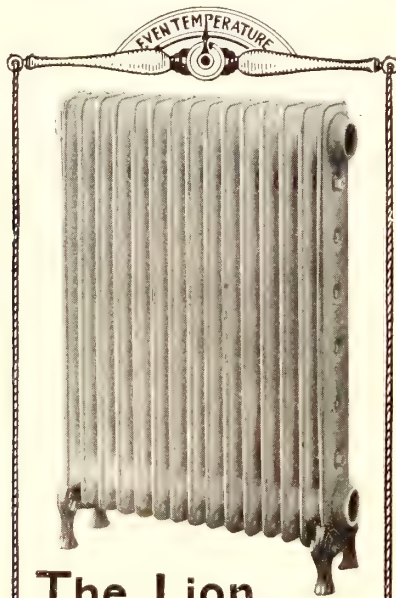
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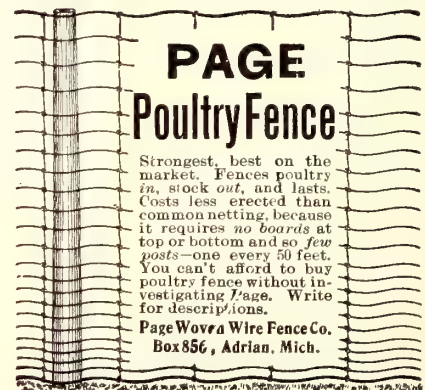
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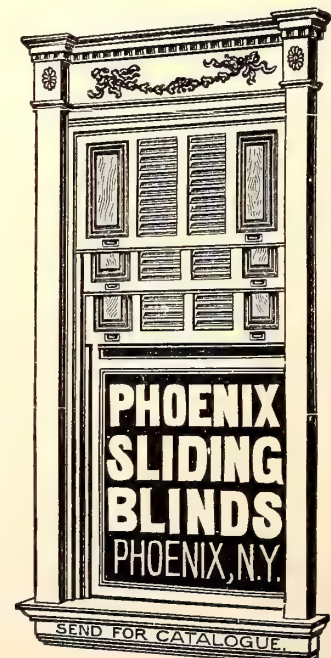
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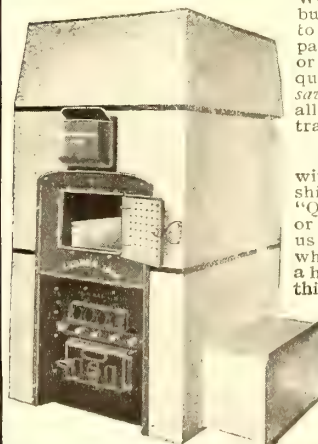
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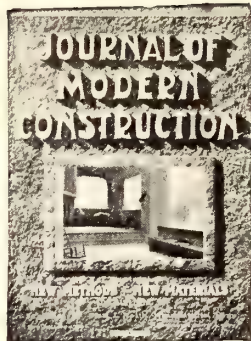
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Also, if you are collecting pieces of furniture, let us know and pictures will go forward. Write for our booklets and literature.

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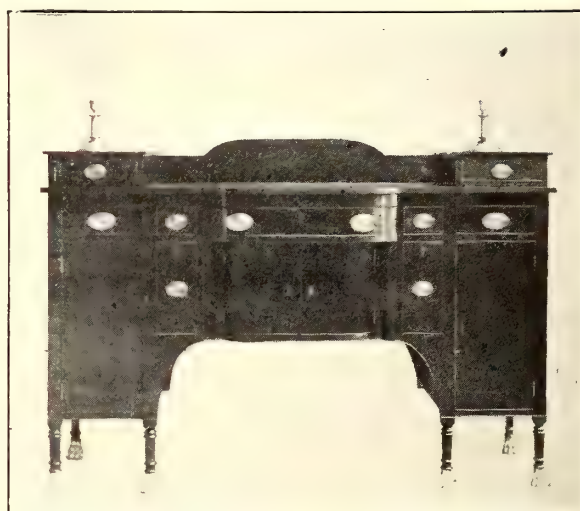
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Bedding Plants from Seeds.

Color Scheme for a Small House.

Garden Hints for March.

The Hardy Lily Bed.

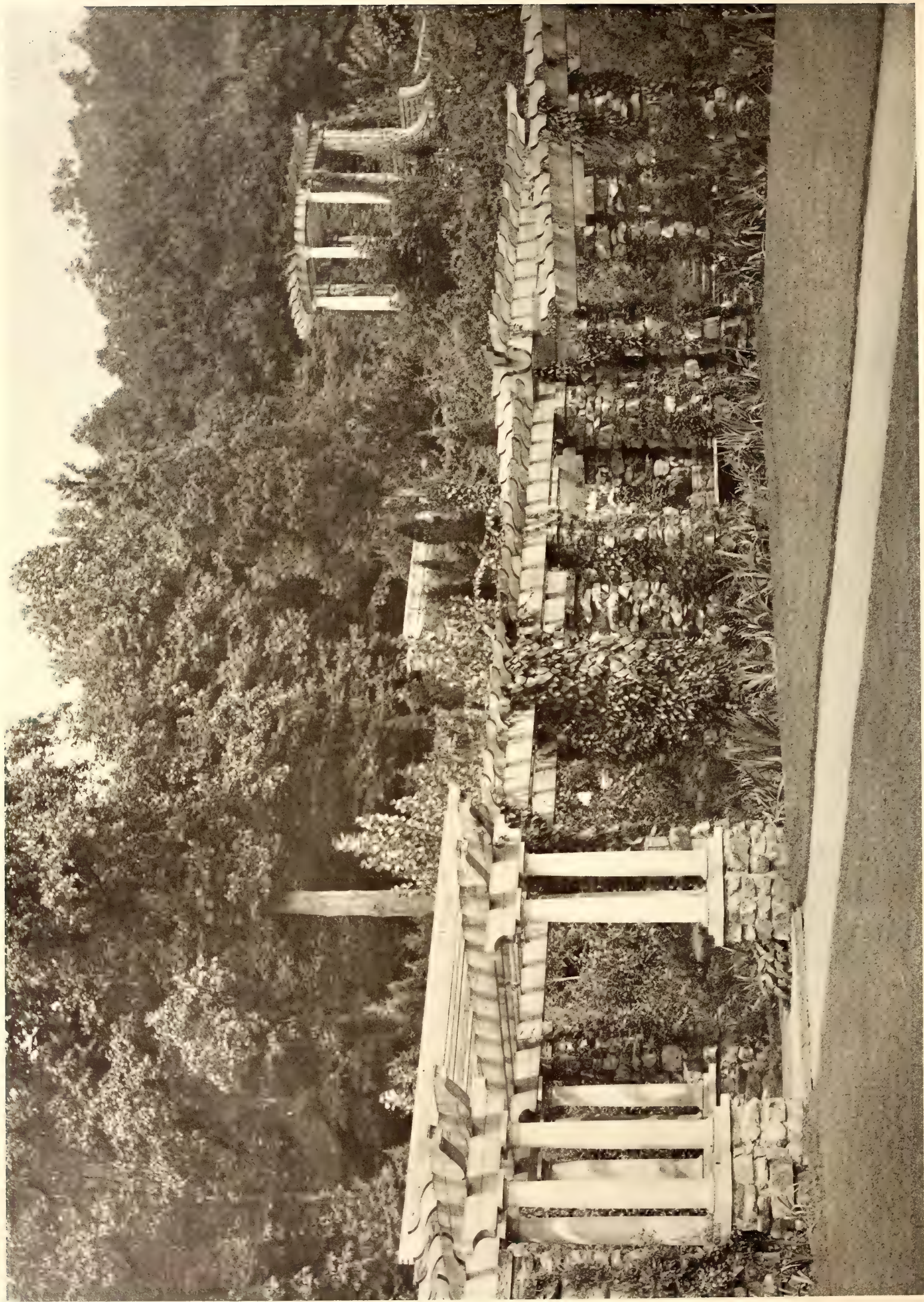
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The Pergola Garden, Terminating in the Belvidere Above, Is One of the Most Striking Features of Mr. Charles W. McAlpin's Garden, at Morristown, New Jersey

AMERICAN HOMES AND GARDENS

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Volume IV

March, 1907

Number 3



The Den in the House of R. L. Burton, Esq., Is an Oval Room, Very Richly Decorated in the Style of the German Renaissance
It Is Crowded with Interesting Bric-a-brac

Monthly Comment



THE open season for country houses, and incidentally for all the delights of the joyous summer-time, is about to open. All the world is agreed that it will be a welcome change. The old-timers will renew the pleasures of past springs and summers, and the newcomers will, with much trepidation, no doubt, make their first acquaintance of the country as a place of residence. Those who know the country will, of course, eagerly welcome every familiar sight and sound; those who go into it for the first time will have mingled sensations of pleasure and dismay. The truth might as well be admitted first as last; for country living is not a wholly unmixed joy, and those who are not accustomed to it should venture forth prepared for all sorts of things, and be as ready for the unexpected as for what is naturally looked for. There is not a spot on the face of the globe that has not its drawbacks as a place of residence. It is true that people of large means, who keep house on a large scale, with a retinue of servants and all the paraphernalia of human greatness, have few reasons to complain of their lot. Even the ennui that besets these folks is not due to the location of their country estates, but to their own shortcomings in not being able to enjoy as they should all their advantages. But the person of average means, and the person of small means, who go out into the country for economy's sake, are bound to meet with more or less inconvenience and perhaps with a number of disappointments. There is but one word to be said to such as these: Wait. Any new place is certain to be different from the old, and what seem to be inconveniences and drawbacks this year will be smoothed away and forgotten next season. There is vastly more joy to be had from living in the country than in the city; but one needs to be accustomed to this new form of life, needs to want to live it, needs to be satisfied with what one has. In the end, one may rest assured, all will come right.

ONE serious error that the newcomer is apt to make in moving out into the country, and which has been more than once referred to in these pages, is the mistake of trying to do too much. Of course one must have one's vegetable garden; flowers, too, are equally necessary; it will be hard to get along without a horse and trap; chickens are apparently the easiest thing in the world to raise; and a cow is perhaps both useful and necessary. It is at once apparent how the bill of expense will mount up. It will be difficult for a man, actively engaged in business in the city, to attend to all these matters himself—not forgetting the inevitable lawn-mowing—and have any rest and comfort from his home life. The expense of a man to do the outdoor work is considerable, and one soon finds one is spending much money for comparatively small return, small, that is, compared to the labor and money expended. The wiser course will be to get settled, and fully settled, before undertaking the unaccustomed tasks that most country labor involves; and then, when you do undertake to spread out, to go slow. Don't do too much the first year, the second year, or even the third year. First get completely accustomed to your environment, and then begin in a small way.

A GOOD deal of harm is done by the zealous over-advocating of the advantages of country life. Quite a number of books, and some few periodicals, set forth, in the most alluring way, the superlative merits of this form of living. They will tell you how your home may be self-supporting from the

crops of fruits and vegetables you will raise; how large an income you may derive from your hens, how profitable it will be to raise various animals. Much of what is offered to an inquisitive world on these subjects is true, and is put forth in perfect good faith; but it is well to remember that what A or B had done, C and D could not possibly accomplish under any circumstances. In other words, our modest writers on these interesting topics naturally keep in the background the personal equation, which is the one chief reason of their success. This is quite as important an element in raising things in the country as winning success in any phase of life, and it is a point that is raised much too seldom. Interesting and accurate as many of the directions for carrying on rural activities are, it will be a distinct advantage to the beginning in such matters to remember that the chances are he will accomplish very much less than the author who has been in the business long enough to write a book about it.

THE winter time and very early spring are not looked upon with favor by the purveyors of country real estate as the best season for their operations; yet the inquiring settler, looking about for a suburban or rural residence, could do worse than begin his discoveries at such times. The person who is new to country life, and who proposes to adopt it permanently, will have the country all the year round. He must stay there in all seasons, in the pleasant days of summer and the cold, unpleasant days of winter. A country road in winter time is not always calculated to arouse enthusiasm for travel along it; yet it may be that it is precisely the road you will have to travel, morning and evening, every day of the year. It will be an illumination into the variety of country life to see such thoroughfares at the worst; it may not be so desirable for the real estate man.

BY THE middle of spring the season of architectural exhibitions will have come to an end. A few years ago the only show of this kind in the United States was that given by the Architectural League of New York; now nearly every considerable city has its architectural exhibition, every city, that is, which is large enough to support an art show of any kind. These exhibitions have increased in interest from year to year, and the care taken in their preparation and the number of persons who view them may confidently be regarded as evidences of a broadening public interest in architecture. There are few subjects on which the public at large stand in better need of information, and while the exhibitions of architectural drawings are but silent forces, they undoubtedly help in an important and useful work. The exhibitions of the Architectural League of New York, whose twenty-second annual show was held this winter, have come to be regarded as the most important of the series. In a measure this is so, since New York is the center of the greatest architectural activity of the country; but the exhibitions in other cities have, in the last few years, come forward into well earned prominence, due partly to the exceeding care taken in the selection of exhibits, partly to the taste shown in their arrangement. New York can no longer boast the only architectural exhibition, and since there are other active architectural centers it is quite as well there should be exhibitions elsewhere. While it is true these exhibitions have taken on a more and more pictorial character, the great fact is that they are held, and that laymen whose interest in buildings is of a peculiarly personal and non-technical character, visit them. To get people to look at architectural drawings is the first step toward getting them to understand them.

Notable American Homes

By
Barr Ferree



The
House of
R. L.
Burton, Esq.
Cedarhurst
Long Island

LARGE estates are quite the exception at Cedarhurst, estates whose area is counted in acres, and Mr. Burton's property of about thirty-three acres is, therefore, quite unusual in extent, as it is unusual in the beauty of its development. This is extensive enough to give a fine setting to the spacious house, and has been beautifully laid out with driveways, fine lawns, trees, shrubbery, together with a hedge-enclosed perennial garden of considerable extent, a fountain and old Japanese monuments. The house is so situated that the larger part of the ornamental grounds face the entrance front, the opposite side of the house overlooking a superb lawn which reaches almost directly to the water.

The house is a great triple building with a frontage of generous length. It is shingled throughout with 36 x 12

Roper split cedar shingles, laid three to the weather; the trimmings are painted white; the chimneys of the outer walls are exposed from the ground and are built of gray brick. Much of the exterior, especially on the entrance front, is covered with thickly growing ampelopsis and English ivy. In plan it consists of a large central building flanked with wings which are connected with the main part by connecting passages. The central part is slightly higher than the other portions, and it alone has dormer windows in the roof story. All the roofs are sloping and form an integral part of the silhouette, but the wing walls are slightly lower than the other parts; their cornices are without the broad plain frieze which surmounts the wall of the main structure, and the windows are somewhat different in dimensions. The window scheme, which forms the chief architectural element of all the fronts, is sufficiently varied in the different wings to give



The House Is a Great Triple Building with a Frontage of Generous Proportions



A Cluster of Phlox Blooms Gaily in One Corner of the Garden

mobility to the design, and yet is thoroughly harmonious and well adapted to the various needs of the interior.

A portico, two stories in height, with four columns, whose capitals are of Ionic type, is built at the center of the entrance front, and is the commanding feature of the exterior. The main doorway, below it, is encased within a pilastered framework whose entablature supports a pointed pediment. The window on either side is included within the ornament treatment of the doorway and each has, beneath it, a built-in seat. Handsome wrought iron lanterns on the portico pilasters complete the special features of the entrance.

The windows on either side of the portico are treated as a single panel, two stories in height. They form a continuously paneled bay, triple in design, the central upper member being round arched, with small circular windows on each side of the arch, while the other divisions are variously windowed and paneled to meet the internal requirements. While seemingly identical in design these bays include a number of marked differences. Thus the upper bay on the left, which lights the stair hall, contains three windows reaching to the summit of the entablature of the lower division. The central lower panel is solid, which is the case with the upper panel on the right. On the right side the windows in the upper tier have panels below them; the lower tier has three windows.

The interior arrangements exhibit an admirable disposition of the space. A great hall occupies the center of the house. To the left are the stairs and passages to the service wing; behind, on the water front, is the dining-room. On the right of the hall is the den, on the entrance front, with the drawing-room adjoining it on the water front. Then comes the living-room, extending from front to front, and on the extreme right is Mr. Burton's office.

The hall is paneled throughout with wood, painted white, with panels of pale yellow embroidered silk. The ceiling has exposed beams, molded and decorated, with yellow panels corresponding to those of the walls. The cornice is upheld by channeled pilasters with Ionic capitals, with decorated consoles in the frieze to carry the ceiling beams. On each side of the entrance door is a recess with a window and a built-in seat. The stairs are on the left, rising within an arched passageway which has a white wainscot and yellow walls. On each side of the arch are

carved mahogany doors leading to the other parts of this floor. The mantel is of wood, with a paneled chimney breast with corner columns standing on pedestals. The fireplace has a mottled white marble facing and hearth. The hardwood floor is covered with handsome Oriental rugs. There is a host of interesting and beautiful objects in this hall. On each side of the fireplace are iron boxes, used in olden times in Spain by the richer classes in traveling for carrying their money and jewels, with enormous spring locks inside. Beyond is a painted Russian sleigh, filled with growing plants. On the other side is a rare old desk inlaid with ivory. On the wall opposite the mantel is an old gold mirror. There are many smaller ornaments, mostly antiques. At the further end the hall opens into a sun parlor or conservatory; it is semi-circular in form and filled with beautiful plants.

The dining-room is a rectangular apartment with windows overlooking the water and at one end. It has a high wainscoting of San Domingo mahogany for about two-thirds of the height, finished with a shelf on carved corbels. The main divisions of the wainscot are continued to the ceiling in the form of richly carved brackets, which support the great longitudinal beams. The transverse beams are closely set, forming narrow oblong enclosures, the spaces between them being filled with canvas and tinfoil painted yellow, with ornamental frames in lighter colors. Above the wains-



The Water Front of the House Shows

cot the walls are treated with large panels of canvas, with tinfoil painted yellow, and painted with designs similar to those used in the ceiling. The fireplace, which extends to the doorway, consists of a single vast slab of green and white marble. A small shelf of the same material projects above the fireplace opening. The chimney breast is enclosed within a large panel of wood. The upper divisions of the windows are filled with leaded glass. The curtains are green silk, embroidered with gold and silver; behind them are white sash curtains. A warm brown rug fills the center of the hardwood floor. Much of the furniture is antique, including the two sideboards and a fine old cabinet filled with china. The door to the pantry is concealed behind a large screen with old French color prints in its upper section. The chairs are covered with carved leather. There is no chandelier, the room being lighted with silver sidelights.

The drawing-room occupies the corresponding position on the other side of the hall. The woodwork throughout is white. On the water side is a shallow bay window, enclosed within an ornamental frame and containing a built-in window seat. A wood wainscot is carried completely around the room save where it is interrupted by the bookcases, which fill a goodly portion of the lower wall surface. The walls are covered with a green colored cloth with small silver circles. The doors and windows have



The Entrance Driveway Is Bordered with a Mass of Shrubs and Flowering Plants

well molded frames. The entrance bay is curved at each end with a decorated wood pilaster whose brackets reach to the ceiling. The ceiling is decorated in the Pompeian style with a broad outer border of green, and a white center with pictorial medallions in the margin. The fireplace is of wood and occupies the center of the further wall. It is designed in a monumental style, with corner pilasters reaching to the ceiling. The fireplace has a facing of yellow marble, and over the shelf is an oblong mirror, built-in. An immense white bearskin is laid on the floor. There is a multitude of objects of interest in this room, the tops of the bookcases at every available place being crowded with bric-a-brac of the most interesting sort. The mantel ornaments are beautiful pieces of old glass ware.

A passage floored with mosaic connects this room with the den on the entrance front and the living-room, which, as has been said, occupies the whole of the further wing of the house. In the passage is a closet with running water for arranging flowers. It is three steps down and a splendid and delightful apartment, quite the largest in the house and in some respects the most interesting. It is divided into three great bays by three standing columns which reach from floor to ceiling. At each end is a half circle window, that is, three windows in one. The woodwork is painted white. There is a paneled wainscot around the base of the walls, which are covered with red burlap. The panels of the ceiling have a gray ground. The room is extraordinarily brilliant in color, the rich red of the walls affording a fine background to the columns and white woodwork. Red, indeed, is the predominating tone. The curtains are red damask and the mantel, which is of white wood, has a fireplace with a facing of red marble. On the shelf are many beautiful pieces of old red and white glass, and many other specimens of the same ware are disposed throughout the room. It is literally crowded with interesting objects of every imaginable sort. Antique bronze lamps of various designs depend from the four corners. There are old clocks, old mirrors, old engravings, a veritable museum of antiques, all chosen with great care and all admirably disposed.

Mr. Burtin's office adjoins the living-room. Originally designed as a porch its open sides have been enclosed, and it now forms a very useful as well as a very attractive apartment. It is somewhat shallow in dimensions and is



Class-enclosed Piazza Used as a Sun Room



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The Water Front of the House Shows a Glass-enclosed Piazza Used as a Sun Room



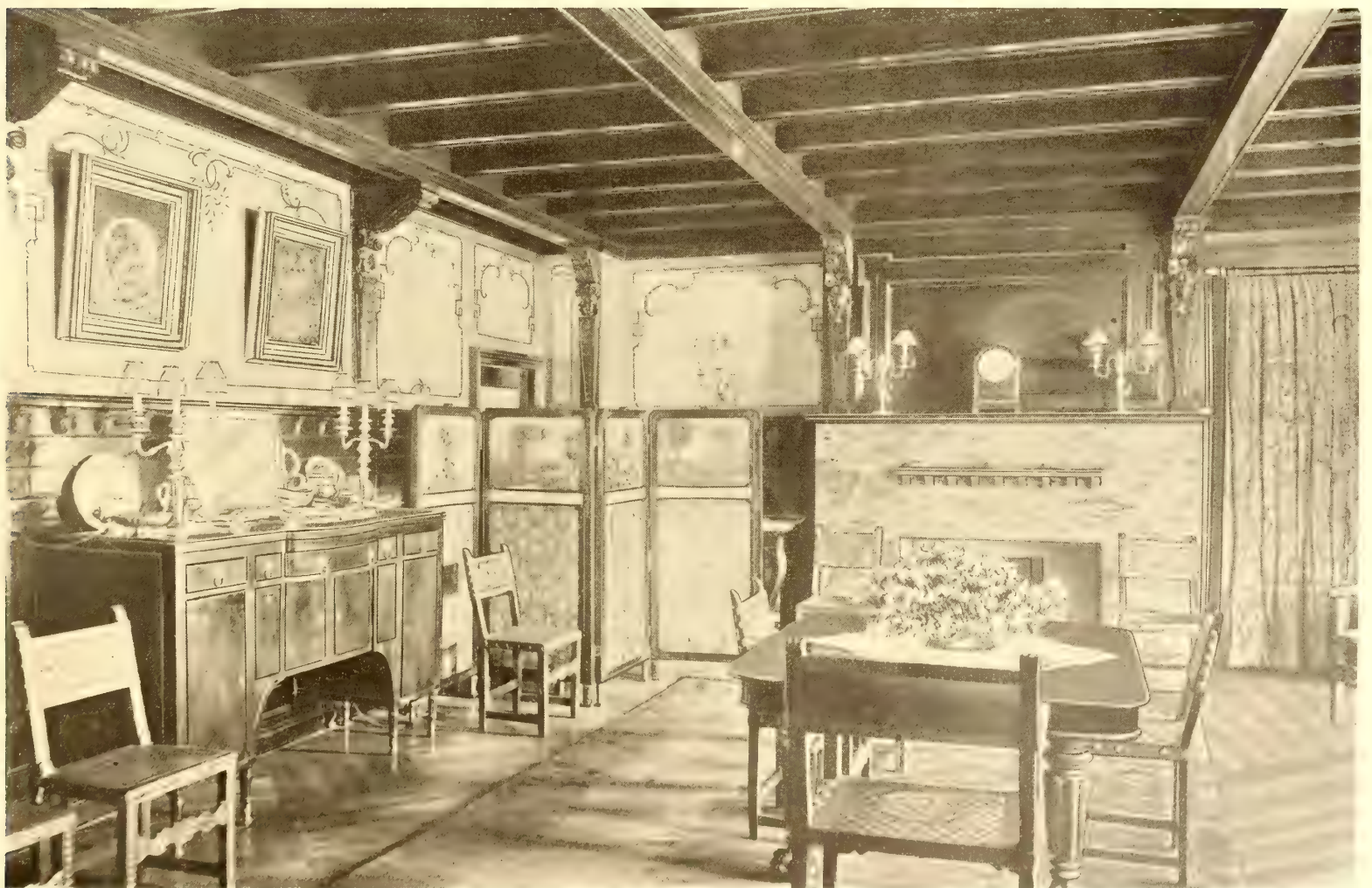
The Boxed Staircase, Console Table and Old Mirror Are the Features of the Hall



The Drawing-room Has White Painted Trim, Low Wainscoting and Walls Covered with Green Colored Cloth Ornamented with Silver Circles
The Facings of the Fireplace Are of Yellow Marble and Over the Mantel Is an Oblong Mirror



The Great Hall Is Paneled with Wood Painted White with Panels of Pale Yellow Embroidered Silk. Ionic Pilasters Support the Cornice



The Dining-room Has a High Paneled Wainscoting of San Domingo Mahogany, Finished with a Shelf on Carved Corbels. The Walls Are Covered with Canvas and Tinfoil Painted Yellow

lighted on three sides. The woodwork is painted white, and the walls are covered with a maroon burlap. The ceiling is of wood, painted white and paneled with French gray. In the center of the entrance wall is an immense

The mantel is all white, with a facing of blue and white tile, especially made in Holland. The shelf is supported on heavily carved brackets, and above are two glazed cabinets, forming the overmantel. On each side of the entrance door from the main

hall is a canopied recess enclosing a built-in seat. A beautifully carved bench stands in one of the corners, and a rare old cabinet and carved table in another. The ceiling is richly decorated and colored with an elaborate scroll design with painted panels. On the mantel shelf and above the cabinets are many fine specimens of blue and white ware, partly Delft and partly Chinese. Much of the pottery with which the room is decorated is also blue and white. The artistic treasures of the room are extremely beautiful and thoroughly soul-stirring to the collector and the admirer of such works of art.

Mr. Burton's house is thus highly interesting in a multitude of ways, each one of which gives it real distinction. Its design is of the pleasantest, comfortable and homelike, qualities much too rare in houses of this size and character.

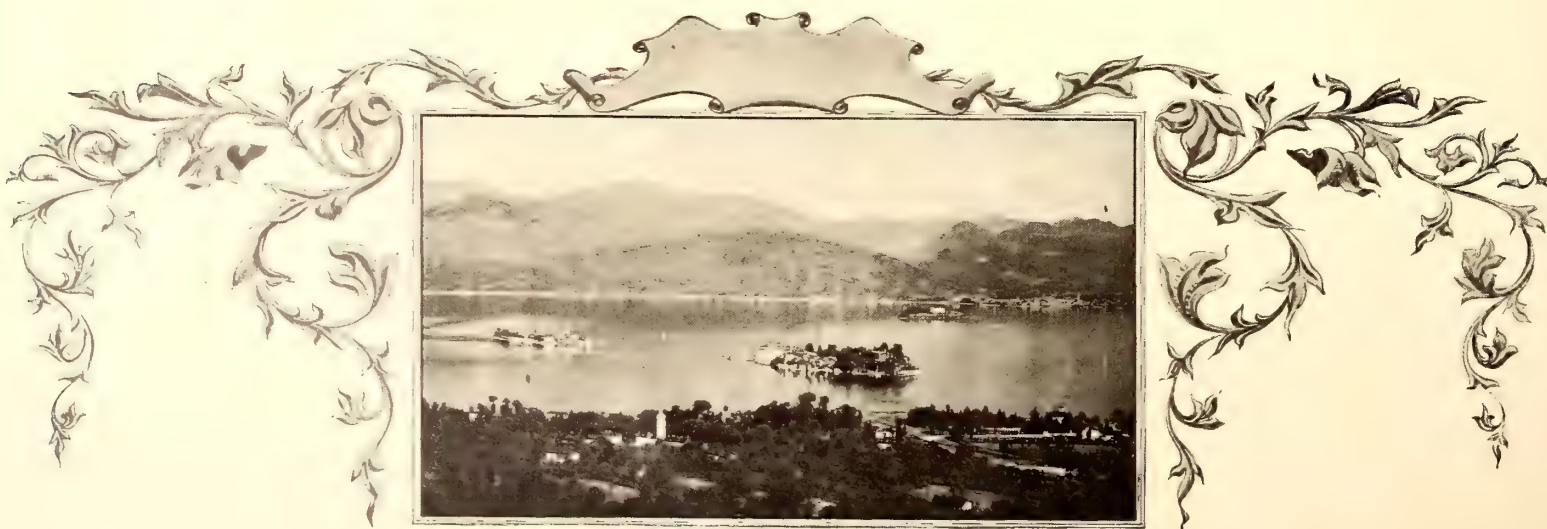
carved seat, with an open back. A great old oblong carved table stands before it. An immense carved chest is another notable piece of furniture here.

The den is on the right of the main hall and immediately adjoins the entrance door. It is oval in form and is decorated throughout in the style of the German Renaissance, developed in a very rich and highly ornamental fashion. The floor is laid with vitrified red tile. The woodwork is dark oak. There is a high wood wainscot, above which the walls are covered with cork tiles. The doors have ornamental frames, with decorated pediments.

It is surrounded with spacious grounds, so ample in area as to have true park-like character. They are spacious enough to include woods, lawns and flower garden, and when it is recalled that every part is maintained in perfect order sufficient has been said. The house is conveniently planned and well planned, admirably adapted to the needs of its owner and showing considerable individuality in this respect. And that it is handsomely furnished has already been explained, and is equally well shown in the accompanying photographs. But the chief interest in the house is its artistic contents, every room being crowded with interesting objects of art.



A Classic Portico Adds Dignity to the Entrance of this Stately House





A Cottage Designed With An Artistic Purpose

By Joy Wheeler Dow

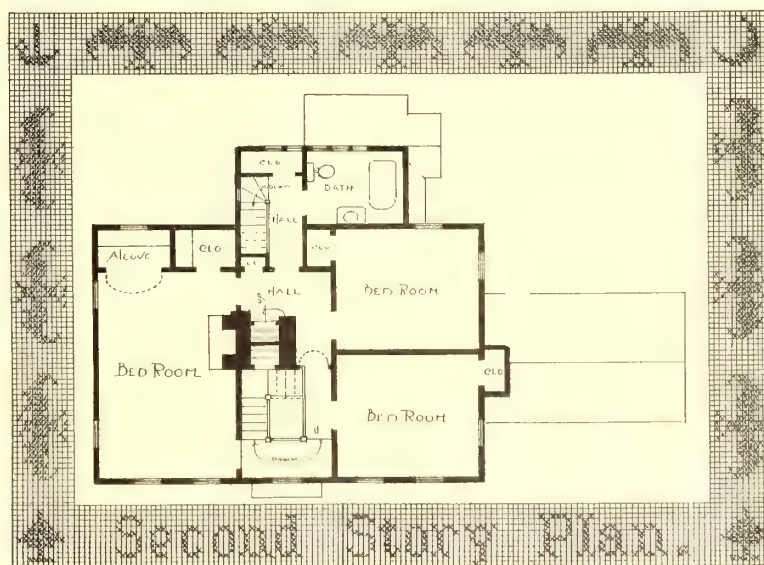
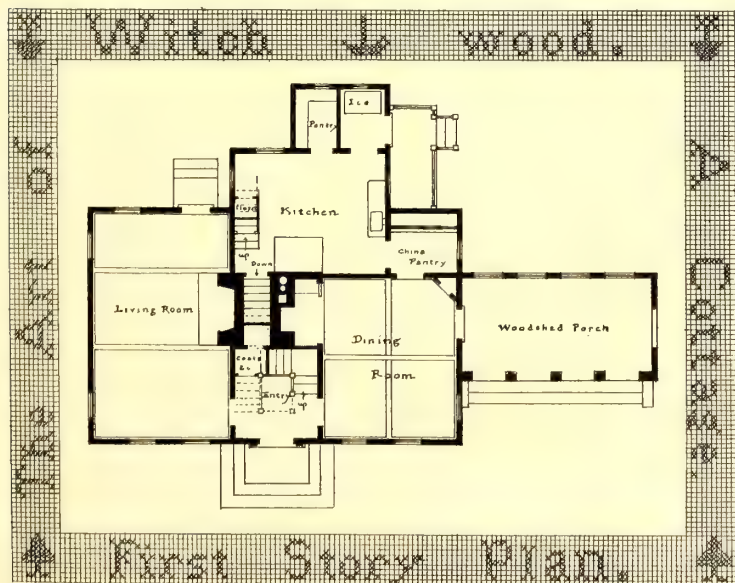
TEN, fifteen years ago the architect could have designed this cottage to be here described, but no one would have taken the plans, no, not even as a gift. And so fearful was he of their non-acceptance, at the present day, by Mr. and Mrs. Cromwell, that not a sketch or outline of the elevations was allowed to escape his studio until the floor plans, which scarcely suggested the Goodey Coles atmosphere in old Ipswich of the inspiration, were accepted, and the blue prints formally delivered. We can not but admit that what is being confided might establish a dangerous precedent to allow the mere reputation of an architect to invest him with the prerogative of designing a cottage—a home for a client, without the customary preliminary sketches in perspective, at least. We honestly believe there would be but one chance in a hundred of the owner's being either pleased or satisfied with the result.

The art of this cottage or of any other cottage or thing equally pleasing to those inner susceptibilities which must be touched in order to be a success, is entirely a matter of luck, however, in the opinion of those—and they are in the majority—who, believing that the secret of success in most things depends upon personal endeavor and perseverance, exempt the indescribable charm of beauty as something intangible unattainable without formulas. And it may sound



The Semi-enclosed Piazza Has Plain Colonial Columns Like Its Prototype

as heretical as it once did for Galileo to say the earth moved, for any one to contradict and reverse the accepted theory, and say that while esthetics may have no mathematical rules, nor indeed grammatical rules, there is a sensitometer—borrowing a photographic term—with which some people are born, whereby the hand is controlled unerringly as it is in a geometrical problem with T-square and triangles. It is the luck of temperament—the luck of circumstances at birth that means success or failure in life, and human endeavor will avail nought without it.





The House Has An Overhanging Second Story of the Style Built in the Early Colonial Days of New England

With the temperament of a designer one's art is never empirical.

There is no more difficult architectural problem than that of the successful cottage. The regulation thing in cottage plans is not very difficult—those dreary repetitions of one another without individuality—but the plans and details for anything with as much character as the accompanying illustrations show, require unending pains and patience for which ten per cent. of the cost

barely remunerates the architect. The elevation drawings for Mr. Cromwell's cottage "Witch Wood" placed beside the elevation drawings of the average cottage proposition would appear as the drawings for a tessellated pavement beside an area to be flagged. Simply to copy them would require more time than a draughtsman would ordinarily spend tracing the plans for several cottages; and speaking of copying leads the writer to insert a word about an extremely elastic if not entirely obsolete code of honor between architects called "professional courtesy."

To his country place Mr. Cromwell gave the name of "Witch Wood," embracing an enviable piece of property of perhaps twenty acres, overlooking the valley and village of Highland Mills, N. Y. In common with other works by the same architect it has no veranda, that is, no acknowledged veranda. What it has instead is a woodshed. That sounds queer.



There Is a Quiet Charm About this Quaint Country House with Its Small Paned Windows and Its Shed Piazza

But observe this woodshed opening from the dining-room and ventilated by louvers in pairs so tipped as to afford a current of air without a draught. Being convenient to both kitchen and pantry, the woodshed transforms itself, with no additional housework, into an out-of-door dining-room, perfectly screened from both kitchen and front entrances. People will more readily accept the taffy-pulled and meaningless motives of New Art, or the equally meaningless newly invented architecture of which the Chicago Auditorium is an example, than legitimate historical development overflowing with delightful traditions. Such is the inconsequence of popular taste.

Occasionally we meet with an unexpected advantage. Favorable to the Witch-Colonial scheme of the architect's was Mrs. Cromwell's idea of an entry in lieu of a hall. She had no space to spare for a hall, she said, which is true in a tiny cottage, and wanted every square foot obtainable for her two best rooms. This decision gave the architect an opportunity to take a mental trip to the old colony in Massachusetts. He recalled the glimpse he once had of the bewitching entry and angular staircase in the house of Dr. Gray at Hingham. It was an inspiration! The thing had the personality he wanted. It is the personal reminiscence every time that makes suc-



One of the Bedrooms Shows An Artistic and Effective Treatment

cessful architecture. The mind must have championship. The fashioning of deal-wood is no companionship no matter how ingenious. Why do we neglect the natural grandeur of America—the Yosemite Valley and the Rocky Mountains for Europe, every summer—that is every summer we can? It is the ancient civilization, the same personal element that lurks in every nook and corner of "Witch Wood." The very panels of the great front door have their story, the cross of St. Andrew was the talisman used in "Scarlet Letter" days to drive the witches off. The secret closet on the stairway (see plan) concealed by the stair paneling, if there be no real ghosts in a new house, yet contains an imaginary treasure box hidden by a rich tory relative during the revolution, not to forget the relics of the regicide who owed his life to the security of this deftly contrived retreat. The secret closet is a mezzanine affair fitted into the huge chimney stack.

And then we have the ample clustered chimney itself, the central mainstay of the whole fabric around which life, in the times of our forefathers, revolved. The chimney at "Witch Wood," as may be seen from the plan, has a passage through



A Large Open Fireplace with Paneled Overmantel Is Placed in the Living-room

not very clear in the interior views herewith presented.

Mrs. Cromwell looked at her furniture, and remarked: "I have scarcely a piece that properly belongs here. We shall have to live up to this house by slow degrees." But better this way than to have a representative collection of historical furniture in a poor architectural setting. That is an almost hopeless anachronism because it is practically impossible to do anything with the house, especially if the furniture be of the vintage of say 1875. Every cultivated person, nowadays, is a furniture collector who is constantly weeding out and improving his stock.

Another decided advantage the architect had was permission to use the small sized lights in the lower as well as the upper half of the windows. Not many of an architect's patrons will readily agree to this, and he often had much concern how to gain the atmosphere so

necessary to one's happiness with the big sheets of plate glass clients have demanded. Indeed the sash bars do not obscure the vision as is always argued, more than one's vision is obscured by the projection of the nose. One may look cross-



An Artistic Inglenook in the Dining-room Has a Paneled Seat and a Colonial Mantel



A Stairway Within the Stately Doorway Is the Feature of the Paneled Hall



A Quaint China Cabinet Is Built in the Corner of the Dining-room

it, and that is a development of our own day, but with several advantages, the two piers being united by an arch in the attic.

We do not expect every one, however, to note all the historical development which has been faithfully carried out in this Highland Mills cottage. The orthodox details, one after another, will impress themselves upon the much interested reader, such as the overhanging upon which he will one day discover the molded chamfers which, to give the mill that did the work due credit, are beautifully executed, likewise the molded drops, all very satisfactory. The experiments of the interior were not less successful, but are

eyed, and encounter the objection, but one does not care to look cross-eyed habitually. It all depends upon the point of focus chosen. There are always kindly disposed friends to tell the owner he is making a great mistake with the small lights of glass; but it is difficult afterward to find any one who will admit having thought the small panes anything other than perfectly entrancing.

This waiting to see which way the cat is going to jump in a matter of art is an evidence of either prejudice or fatuity. In an age of magazines and free libraries an education sufficient to distinguish between what is true and what is false in architecture is easily within the reach of everybody.

The Garden of Charles W. McAlpin, Esq.

Morristown, New Jersey



HILLSIDE, gently sloping, with long, broad stretches almost level; a generously wide field of ground, bordered on right and left by pleasant growths of trees of forest size, and long uprising; and a great belt of foliage, dense and green at the summit, a curtain of nature's own devising, shutting in the open space below. This, in briefest outline, is the garden of Mr. Charles D. McAlpin at Morristown, N. J., designed by David W. Langton, landscape architect, of New York.

It is an isolated garden, a garden for itself alone. That is to say, it is neither related to the house nor immediately in juxtaposition to it. A house there must be for every garden; since there can be no garden unless there be some one to enjoy it; and enjoyment in the countryside is difficult without the house—as difficult, no doubt, as it would be without a garden wherein one may be at peace with nature and oneself.

But the McAlpin garden lies alone on its hillside, with the house before and below it, and separated from it by a vast wall of arbor vitæ, whose great arch frames the central path and forms an opening and approach of wonderful dignity and charm. Thus the garden is not unheralded. On the contrary its bounding wall of everlasting green piques one's curiosity as to what may be beyond it. The great arch, moreover, lifts its head proudly and may be seen from afar; truly, it is a mark of some significance; no mere hint, but a true emblem of triumph.

Though the slope of the ground is moderate, the level of the lower garden area is almost above the roof of the house, whose summit may just be discerned above the dense enclosing hedge. The archway passed, one stands within the flower garden. It is an immense rectangle, hedge bordered on right and left with central beds of grass and flowers, cut by straight paths.

As a design it could not be sim-

pler; as a garden it could not be finer. The borders are faced with the gayest bloomers, chiefly annuals, that run from end to end, and are returned to the arch of entrance. The grassed spaces in the center are so large that even though much of their surfaces is taken for flower beds, the green sward counts, and counts considerably, in the general effect. The center of the whole has the Venetian wellhead one looks for almost instinctively in such places, with clusters of bay trees in earthenware pots, standing sentinel-like around it on the nearby grass. Rectangular borders of evergreens, placed well within the grass, mark still more definitely, the importance of the center; while flower masses on each end and on the outer side of the grass complete the planting here. A wall fountain, truly Byzantine in design, forms the chief feature of one side of the garden—an interlaced slab let into a backing of brick, with an open arch above for further emphasis.

Looking straight ahead from the point of entrance—the mammoth arch of arbor vitæ—the ground rises; at first with a sharp slope; then more gently; and all this upper area is

crowned with a group of pergolas, pergolas built around a second garden, one at a higher level than the first, overlooking it, in, perhaps, much the same way that the Acropolis at Athens overlooked the city at its feet. The simile is, perhaps, somewhat far-fetched; yet the effect of these pergolas, bounding a silent, open square, actually above the lower ground, actually overlooking the nearby foreground below it, actually giving the eye a new outlook over distant hills and valleys beyond—the effect is one of stimulating interest.

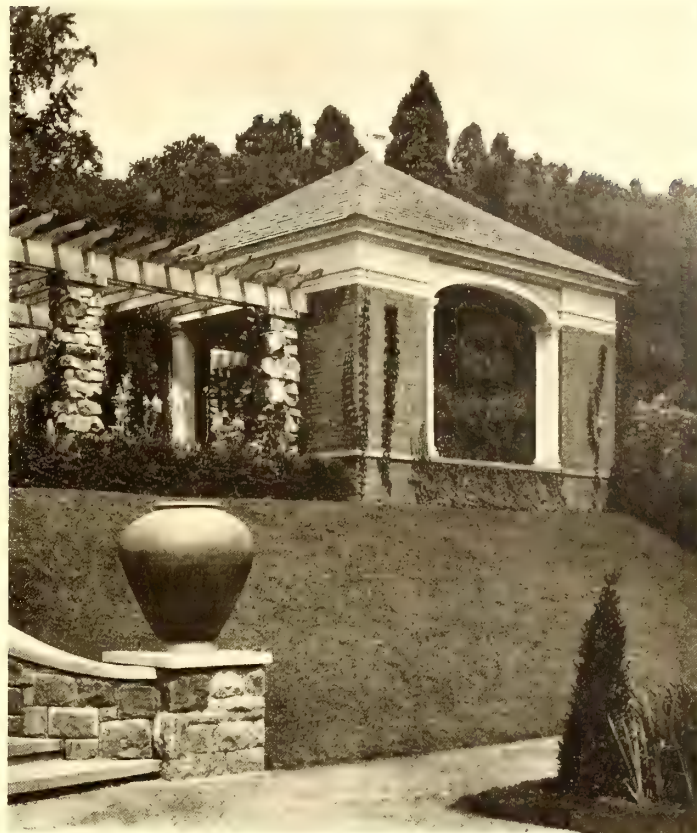
The pergolas garden is of agreeable spaciousness. One wanders through long alleys, bordered with great piers of stone, vine clad, with open roofs; or pauses a moment at the central openings, marked with clusters of plain white columns; or lingers in the tea houses or observatories



A Great Wall of Arbor Vitæ Separates the Garden from the House, Which Is Reached Through a Superb Living Archway



The Pergolas Garden Is Interesting. It Has Great Stone Piers Covered with Growing Vines and Flowering Plants



A Tea House Is Placed at the End of the Pergola Which Is Reached by a Stone Staircase



The Garden Is Formally Planned with a Venetian Wellhead in the Center and Bay Trees in Large Earthen Jars

built at each end of the lowest pergola from the windows of which the whole of the lower garden is overlooked, as well as much of the outer world as the wall of arbor vitæ and the surrounding trees will permit.

It is a garden of pronounced individuality, yet its merits have been obtained by the simplest means. The chief factor in giving it interest has been the spaciousness of the site. There was ample ground here, ample room on which to grow plants and lay out an interesting type of garden. So far as ground plan went, therefore, it was possible to proceed on a scale of real magnificence.

But here the magnificence stopped. Grandeur in a garden is too hazardous a matter, particularly in our trying American climate. Good plants and plenty of them; good planting and ample seems to have been the motto here. Very enjoyable, therefore, is the variety of the plants and shrubs here,

but which, save in number and spaciousness of arrangement, do not differ widely from the contents of many a less pretentious garden than this.

With the pergolas somewhat more latitude was permissible. Here again was space, ample and of generous quality. The pergolas were designed to cover a liberal quantity of ground and were built in a generous manner. Yet they, too, are simple and unadorned, appealing to the spectator by reason of their size, their arrangement—a great open square which they completely surround—and their position. And year after year their bare frames are being covered closer and closer with foliage, and year after year the whole garden, the upper garden with its pergolas and the lower with its lawns and flower beds, increases with that loveliness and interest which age gives to gardens more completely than to anything else.

The Kitchen Furniture

By Sarah Adams Keller



NO ROOM is so sparsely supplied with furniture as the kitchen. The permanent fixtures, range and sink, the boiler and wash tubs consume so much room and require so much space for their use that there is often barely enough room left for the most necessary pieces of furniture without which the kitchen would be incomplete and all but unusable. Furniture of a limited kind is, however, needed for the kitchen, and it must be well adapted to use.

A kitchen closet is apt to be a very miscellaneous receptacle indeed, into which everything is thrust and where nothing can ever be found. Systematic arrangement and distribution of all utensils, supplies and other articles will add greatly to the convenience of the kitchen, and will be found, in the end, to fully repay any effort put forth to establish it. This becomes a comparatively easy matter where there is room, but the ingenuity of the housekeeper will be tested when it comes to arranging kitchen tools and foods within narrow compass. If the house contains a pantry matters will be much simplified, since in that case the china and table ware will be kept there, as well as supplies in bulk.

But whatever the size of the kitchen some system in arrangement and disposition of the utensils is imperative. The dresser is intended for dishes and small supplies, such as tea, coffee, and spices and the like. Narrow shelves are to be preferred to wide ones, for they facilitate use. Wide shelves are standing temptations to overloading, and it is almost impossible to prevent articles from being stood two or three deep, a method that is quite destructive of ready use, and which sooner or later falls into positive confusion. The dresser may consist of shelves built into the wall or be a separate article of furniture. It should be enclosed within glass doors. The topmost shelf should always be within easy reaching distance. It will be found very helpful to have a definite place for every definite kind of article that is given place in the dresser, and this systematic arrangement of contents should be insisted upon as an essential feature of the kitchen economy.

The pots must be placed by themselves and must have sufficient room, so that each can hang or stand free and independent. Sometimes the space under the dresser is set aside for this purpose; sometimes a separate closet is used for the pots. The closet beneath the sink, which in old time kitchens was used for this purpose, is, of course, no longer available

in the modern kitchen, and should not be used even if present. Kitchen cabinets, which partake of the character of a dresser, are now made in a variety of forms, many of which are compact and convenient and are well adapted to kitchens of modest size, where space is valuable and the equipment comparatively slight. The styles range from simple to complex, the latter containing a number of divisions and devices for the convenient handling of materials.

The kitchen table is indispensable. Its size will be determined by the size of the room, for no kitchen table was ever yet too large for the demands that will be made of it. A simple wood table, covered with oil cloth or enameled cloth and provided with a drawer, in which may be kept the kitchen knives and forks and similar utensils, will be found sufficient in many kitchens. If the table has a zinc top it will be found useful for washing dishes when the sink is not available; when the zinc wears out its utility will be lengthened with a covering of table oil cloth. A more convenient table is a specially built affair, of a height adapted to the height of the person who has to work at it, so arranged as to avoid stooping. This condition, of course, avails only when the table will be used indefinitely by the same person. It should be mounted on castors so as to be readily moved, and may have the lower space entirely filled with drawers and cupboards. Facility in use will be obtained by making these of different sizes, depths and heights.

If the laundry work must be done in the kitchen, as is the case in many small households, some special provision must be made for it. This is a matter that will require utmost ingenuity in crowded quarters and is always an affair of more or less difficulty. The ironing boards, stands and cloths should be kept together. It may not be possible to have a separate and special closet for them, but if other articles are kept in the same closet it should be so filled that the ironing boards, etc., can be readily reached without the necessity of taking other things out.

The clothes horse, while one of the most difficult of household articles to store, is one of the most useful. It is difficult to offer advice on this article, for its disposition is entirely dependent on space, and the housekeeper can only do the best she can. Several patented devices are made as substitutes for the old fashioned article, including apparatus which depend from the ceiling, and hence take up no floor or wall room. Ropes and cords stretched across the kitchen are poor substitutes for wooden bars. If not immediately re-

(Concluded on Page 116)

The Residence of Charles W. Welsh, Esq.

Oak Lane, Pennsylvania

By Burr Bartram



THE general design of the house erected for Mr. Welsh is in the English style of half-timbered work. It is broad, low, and characteristic of its style of architecture. It is surrounded with about two acres of land, which is beautifully wooded with tall, stately chestnut and oak trees, forming a very attractive setting for the house, and the blending of the colors of the trees and the house are most harmonious.

The architect has sought to present a house with a dignified appearance. The first story and terrace wall is built of local rock-faced stone, with dressed stone copings and sills laid with wide, white pointing. The front terrace is reached from a walk, which starts at either side of the estate. The second and third stories are built of half-timber work, with cypress forming panels which are filled in with stucco of a soft gray color; the timbers are stained a soft brown. The sash and the trimmings of the first story are painted ivory white. The roof is covered with shingles and stained red.

The porches at the entrance, and at each side of



Stone Steps Lead Up to a Brick Terrace Which Extends Across the Front of the House



Local Rock-faced Stone and Half-timber Work Were the Materials Used for the House

the house have wooden floors, while the terrace has a floor laid with brick in herring-bone fashion.

The plan presents a compact arrangement of rooms, with a central hall, and rooms on either side. The color effects of the interior have been carefully studied with a view of making the rooms appear as large and light and attractive as possible. The hall, which in reality is a living-room, is fitted up accordingly. It is trimmed with English oak. It has a high wainscoting of oaken battens. The ceiling is beamed with oaken beams, and the wall space between these beams, as well as the wall space above the wains-



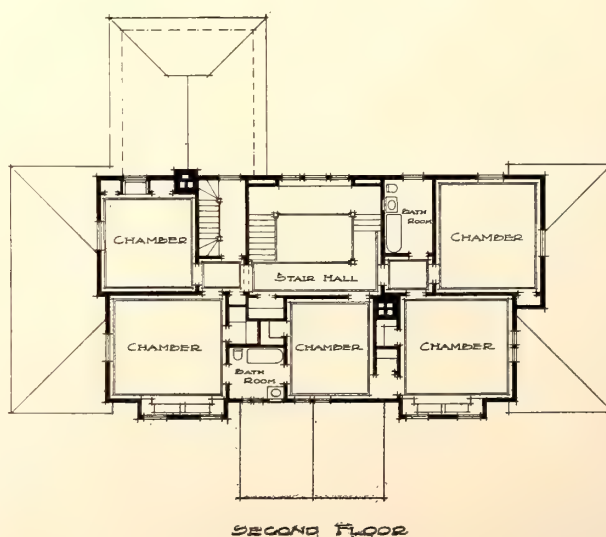
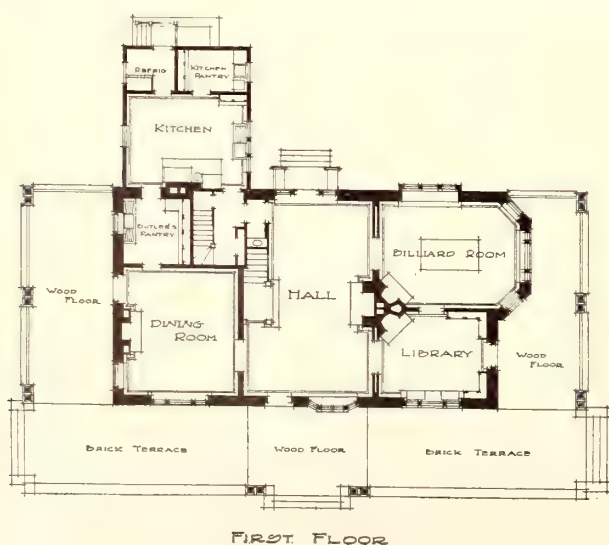
A Circling Roadway Leads Up to the Terrace at the Side of the House



The Rear of the House Is as Attractive as Its Front

coting, is covered with Japanese grass cloth on which is a decorated stenciled border. The broad, open fireplace has a hearth and facings of a dull green tile, and a mantel of excellent and appropriate style. Opposite the fireplace is a broad stair-landing from which the stairs ascend to the second floor; this staircase is of simple design, with paneled newel posts and square balusters.

The library is painted white throughout. It is surrounded with bookcases and paneled seats, and in one corner is an open fireplace with white enameled facing and hearth, and a mantel of Colonial style. Beyond the library is the billiard-room, which is trimmed with oak and finished in the Flemish style. It has a batten wainscoting, the same as the hall,





Quartered Oak Is the Trim of the Hall, While the Walls Are Covered with Japanese Grass Cloth Decorated with a Stenciled Border

above which the walls are covered with a dull red striped paper, finished with a neat molding, from which pictures may be hung. The corner fireplace is built of red brick with the facings and hearth of similar brick, and a mantel. At one side of the room is a cluster of windows under which there is placed a paneled seat.

The dining-room is treated with white paint, and has a paneled wainscoting, above which the walls are covered with tapestry, and the whole finished with a massive wooden cornice. The open fireplace with its brick facings and hearth and its mantel with Ionic pilasters is the important feature of the room. This room is carried out with Colonial characteristics and is quite in harmony with its furniture.

The butler's pantry is fitted with all the best possible conveniences. The kitchen and its dependencies are fitted up complete. The servants' hall and stairway is a private one, from the cellar to the third floor, which contains the extra guest rooms and the servants' quarters.

There are five bedrooms and two bathrooms on the second floor. All of these rooms are painted white, and the walls of each room are decorated in a particular style and with one color scheme. The bathrooms have tiled floors and wainscoting, and porcelain fix-

tures and exposed nickel-plated plumbing. A cellar furnished with a cemented bottom, contains a laundry, heating apparatus and fuel rooms.

The exterior grounds, as already mentioned, are spacious in area, and are surrounded by a privet hedge. The front of the house which is quite open has had its beauty enhanced by the graceful planting of a group of evergreens. Messrs Bailey and Bassett, of Philadelphia, were the architects, and to them is due credit for having produced so delightful a house.

The site, which is surrounded by roads on three sides of the estate, presented an excellent opportunity which the architects were sufficiently clever enough to grasp in the laying out of the grounds, and the designing of a house appropriate

to the site and its surroundings. This is a very important point which does not always receive the careful consideration which it deserves, but it is the one from which the beauty of an estate is maintained, and its harmonious results established.

In this particular case, the result obtained has been most happy. The whole general scheme is one of complete harmony.



White Painted Trim, Walls Covered with Tapestry, Fireplace with Brick Facings and a Colonial Mantel, and Good Mahogany Furniture Are the Principle Features of the Dining-room

Two Modern Houses

By Paul Thurston



THE residence built for W. G. McAdoo, Esq., at Yonkers, N. Y., forms the subject of the illustrations presented in Figures 1, 2, 3, 4, and 5.

The underpinning, built of rock-faced blue stone, is laid up ashler. The superstructure, of wood, is covered on the exterior framework with matched sheathing, and is then covered with red cedar shingles stained a rich brown color. The trimmings are painted cream white. The roof covered with similar shingles is stained a deep moss green.

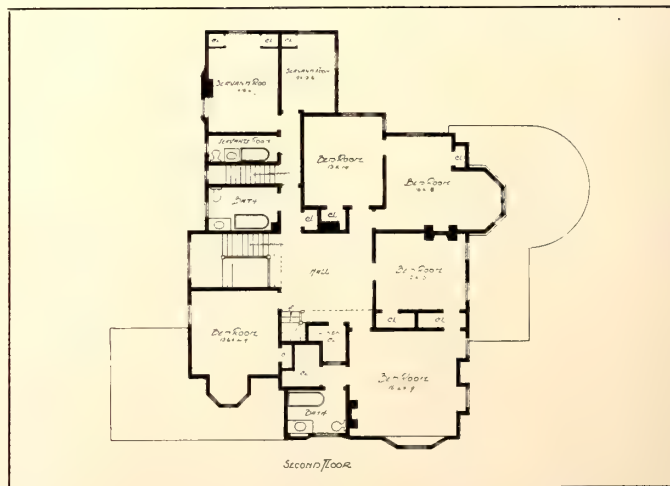
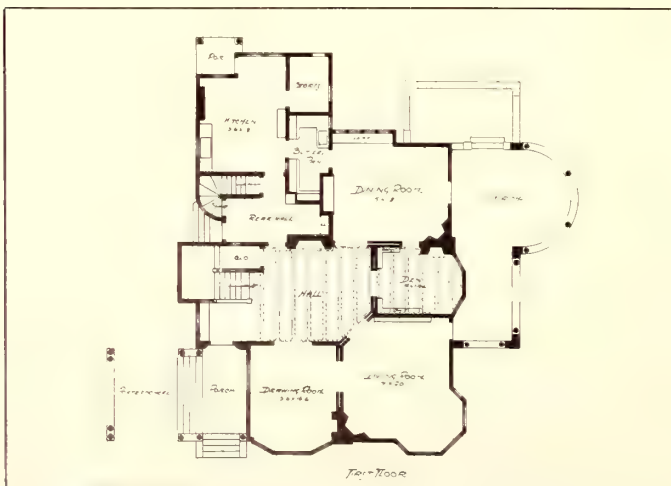
The hall is an attractive apartment, and is trimmed with white pine and treated with old ivory white paint. It has a paneled wainscoting and a beamed ceiling similarly treated. The ornamental staircase, built in an artistic manner, is lighted by a cluster of delicately tinted leaded glass windows. A paneled seat is provided at the side of the staircase. The fireplace is an arched one built of molded brick with the facings and a hearth of

the same and the whole finished with a neat mantel shelf. The drawing-room is also treated with ivory white paint, and has a bay window and an open fireplace which is built of brick and furnished with tiled facings and hearth, and a mantel of Colonial style. The living-room, trimmed with mahogany, has a fireplace of brick, bookcase built in and a bay window. The den has a beamed ceiling, a paneled wainscoting, bookcases, and an open fireplace.

The dining-room is most attractive and is artistically treated. The walls have a paneled wainscoting, and this together with the trimmings and doors are painted an old ivory white. The walls above this wainscoting are covered with burlap of a mustard color, forming a very excellent setting for the plates of old delft blue which forms one of the interesting characteristics of the room. The fireplace has facings and a hearth of rough faced delft blue tile, and a mantel with cabinets over the shelf with lattice glass doors. The buffet and a china closet is also built in with lattice glass doors. The bay window has a



1—Brown Stained Shingles and Cream White Trim Is the Color Scheme of the House



2—An Excellent Arrangement of Rooms Is Noted by a Study of the Plans



3—A Molded Brick Fireplace Is the Feature of the Hall

paneled seat. The butler's pantry is fitted with drawers, dressers, and sink. The kitchen is furnished with all the best modern conveniences.

The second floor contains an open hall, five chambers, two bathrooms, besides two servants' bedrooms and a bathroom. The bathrooms have tiled wainscoting, and porcelain fixtures and exposed nickel-plated plumbing. There are three bedrooms and a bathroom on the third floor. A cellar, cemented, contains a furnace, laundry, fuel rooms, etc. The architect was Mr. G. Howard Chamberlain of New York.

The illustrations shown in Figures 6, 7, 8, 9, and 10 present a house erected for H. K. Fowler, Esq., at Summit, N. J.

The foundations, exposed chimneys and part of the first story are built of gray Hopatcong granite in rubble work. The remainder of the building, sides and roof are covered with silver gray shingles, while



4—The Dining-room Has Ivory White Painted Trim and Walls Covered with Mustard Colored Burlap, Forming an Artistic Background for the Old Delft Ware



5—A Corner Fireplace and a Colonial Mantel and Mahogany Furniture of the Sheraton Design Are the Chief Characteristics of the Dining-room

the trimmings are painted cream white. The blinds are painted green.

The hall, a central one, has a vestibule furnished with a tiled floor in mosaic. It is trimmed with green bog-oak with a paneled wainscoting, above which the walls are of crimson, and are finished with a massive wooden cornice. The ceiling is tinted a cream color.

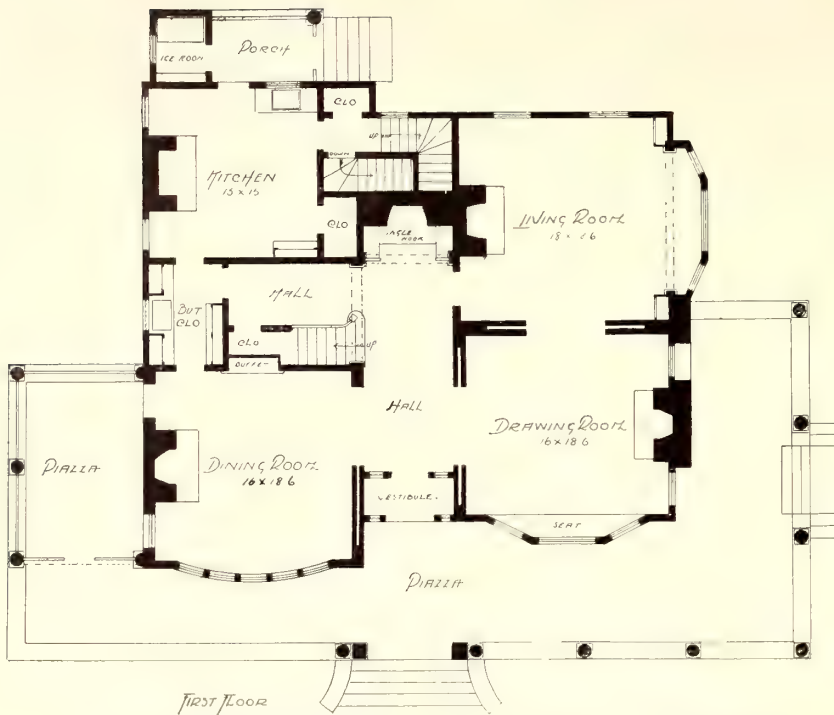
The inglenook is furnished with an open fireplace with ox-blood glazed tiles and a carved mantel with settles at either side. The staircase is recessed and is built in an attractive manner. The beams over the entrance to the staircase, and to the inglenook, are carried on pilasters with handsome, carved brackets. The side stairs lead up to a broad landing with a cluster of windows glazed with leaded panes, in the front of which is a wide window seat.

The drawing and living-rooms are separated, one from each other, by double sliding doors. The drawing-room is trimmed with old mahogany and has a carved mantel and a window seat. The living-room is trimmed with golden oak with bookcases built in, and is provided with a paneled wainscoting and an open fireplace with a mantel with its carved frieze in plaster, a replica of "Vintage," and facings and hearth of the old gold Hartford faience tile in harmony with the golden-brown tone of the wall hangings, hardware, and gas fixtures, which are in a soft antique finish. The bay window, with leaded casements, wide and deep, is fitted with paneled pilasters supporting a heavy beam overhead with carved grotesque corbels.

On the opposite side of the hall is the dining-room which is trimmed with oak, and contains a wooden plate shelf, and a buffet built in with leaded glass doors. There is also a mantel with combination china

The Water Supply

By Ralph Ernest Blake



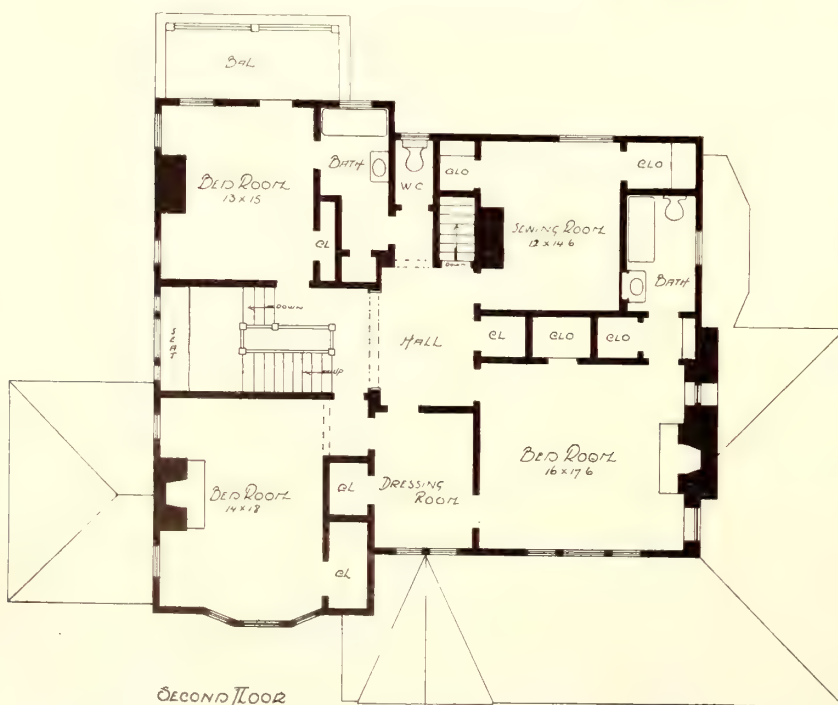
6—The First Floor Plan of Mr. Fowler's House Is Quite Unlike Mr. McAdoo's House

cabinets, and a hearth and facings of deep blue faience tile.

The butler's pantry is fitted with drawers, silk, and dresser complete. The kitchen and its dependencies are fitted with all the best modern conveniences, including a sink, fireplace, dresser, pot closet, store pantries and ice room. This kitchen and butler's pantry is furnished with tiled walls. The second floor contains three bedrooms, large closets, dressing-room, sewing-room, and two bathrooms. This floor is trimmed with natural woods, and the two bathrooms are fitted with tiled walls. Each is furnished with porcelain fixtures and exposed plumbing. There are four bedrooms, and bath, store room and trunk room on the third floor. A cemented cellar contains a laundry, hot water heater, fuel rooms, etc. The architect was Mr. Benjamin T. White of New York.



7—The Great Chimney at the Side Lends Rugged Strength to the Exterior



8—The Second Floor Contains the Usual Complement of Bedrooms and Bath

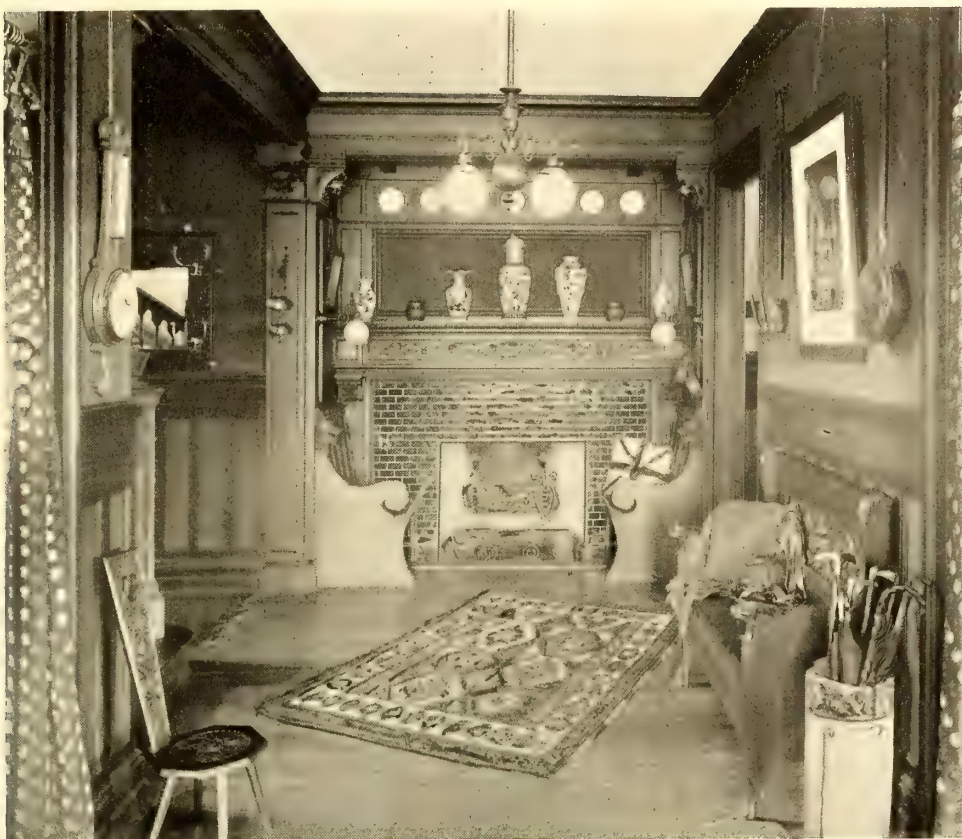
FEW matters are of so much importance to the house as the water supply. In the city, if sources are good, no difficulties concern the house owner as to its relationship to his house; in the suburbs there is frequently a public source of supply which requires only to be connected with the house; but in the country, where an individual supply must be obtained, the matter is one of the gravest concern, frequently involving large expense, and the installation of a complete water plant.

The person whose business or occupation calls for living in the city is utterly helpless in the matter of water supply and must, perforce, content himself with what the public authorities provide. He can not choose a city because its water supply is good, nor can he avoid one because it is bad. But there is a freedom of choice

in the country which should always be availed of, and it is one of the prime essentials of a good site that a good water supply be adjacent or within easy reach.

Water for household use must be pure. Chemically pure water does not exist in nature, but analysis will readily determine its constituent parts, and should always be made before dependence is placed upon any source of supply. The sources of water are well known, and consist of rain water, surface water of rivers, lakes and ponds and ground water which is obtained from springs and wells. The ease with which water may be polluted is very great. Rain water would be pure if it could be collected immediately on condensation; as a matter of fact it is only available after it has passed through various strata of the air, during which it absorbs more or less impurities. It must be stored in vessels or cisterns, all of which are apt to be sources of impurity. Owing to its irregular supply it is the least safe of all waters available for household use. It is classed as "suspicious" for cooking and drinking purposes, but is the softest of all waters and hence is greatly prized by the housewife for washing purposes.

The purity of surface water is largely dependent



9—Green Bog-oak Is the Trim of the Hall

upon the soil and country which surrounds it. Rivers that pass through crowded cities are unsuitable sources of water supply, but the water at their heads is markedly purer than that near their mouths and approximates spring water in purity. The waters of lakes and ponds are loaded with mineral constituents. Both spring and deep well water are regarded as very palatable and seldom contain bacteria unless specially polluted. Wells for domestic purposes must be deep driven in soil free from impurities and placed far enough away from all sources of contamination to be wholly free from their influence. Artesian wells are well known sources of water supply, and if driven deep enough are independent of sub-soil impurities by which ordinary wells are chiefly affected.

Water is rarely pumped direct from the sources of supply to the distributing agencies within the house, but must be stored in reservoirs if large quantities are desired, in cisterns or tanks if smaller quantities suffice. Reservoirs are lined with brick; cisterns are made of cement and slate. Neither mortar nor metals should be used in either case, the former giving up lime to the water. The size of the cistern will depend on the amount of water to be stored, the size of the house, the number of persons living in it, and the availability of the water supply.

Natural waters being impure sanitary science has given great attention to their purification. This may be concerned with its physical, chemical or biological state. Thus turbid water may be made clear; water may be deprived of its mineral impurities and it can be rendered practically free from harmful bacteria. Various methods are employed for this purpose.

Many streams and lakes are self-purifying. While this is often accomplished to a very extraordinary extent it is by no means universal in its results and can not always be depended upon. Filtration is

regarded as a much more safe and efficient method, and in one form or another is now regarded with great favor for all municipal plants. It not only removes particles suspended in the water, but diminishes the organic matter and bacteria in the water. Several methods have come into general use.

Sand filtration is now largely practised. A continuous filter is used when the water is passed through the filter continuously and is advisable when the water is highly polluted. Intermittent filtration must be employed when the water is highly polluted and the flow of water can be interrupted from time to time. The larger part of the purification process in a sand filter is carried out on or near the filter surface.

Several forms of mechanical filtration are also in use and depend on the passing of large bodies of water through limited sand areas, chiefly under considerable pressure. Iron or alum is used as a coagulant, precipitating the suspended matter and bacteria. Small filters of this sort are sometimes used for household purposes, and have also been employed for large plants.

Household filters are used either for the whole of the house supply or that used for cooking and drinking purposes. They should have sufficient purifying power to restrain all suspended matters, remove dissolved organic or deleterious matter and arrest micro-organisms and be able to accomplish these purposes in a reasonably lasting manner; the filtering medium should yield nothing to the water; the delivery should be good and as rapid as efficient purification will permit; the apparatus must be constructed so it can be readily taken apart, examined and cleaned, and it should not be subject to decay. The best of domestic filters require frequent cleaning and careful watching.

Other methods of water purification include distillation, boiling and treatment with chemicals.



10—Dining-room Is Trimmed with Oak, and the Fireplace Has Faience Tiled Facings and Hearth



An Arts and Crafts Experiment in An Old Rhode Island Mansion

By Leila Mechlin



IN A picturesque old country road leading from Lonsdale to Saylesville, Rhode Island, stands "Hearthside," the stately mansion which was taken as a model for the Rhode Island house at the St. Louis Exposition. Built not later than 1814, by Stephen Hopkins Smith, a once noted horticulturist and manufacturer, with, it is said, thirty thousand dollars won in a lottery, it is now occupied by Mr. Arnold G. Talbot, the grandson of the original owner's cousin, who, with his wife, is reviving beneath its roof the old and almost forgotten industry of hand weaving.

Architecturally the house is particularly interesting, for while it is obviously Colonial in style, it presents certain unusual features, and is distinctly irregular in design. The name of the architect is not remembered, but whosoever he may have been, he was undoubtedly a man of good judgment and definite originality. The general form of the building is rectangular,



The Broad Entrance Hall Divides the House in Two. The Stairs Are Partly Concealed
The Carved Oak Chest Is Earlier Than 1700



The Dining-room Is Crowded With Interesting Articles. The "Beaufat" in the Corner Belonged to General Frazer's Mother. His Knife, Fork and Spoon Cases Are on the Sideboard. Quaint Silhouettes Hang Over the Fireplace

but the side walls terminate in curved gables and the front is spanned by a broad portico of four columns, extending through two stories and resting upon a slightly elevated stone platform.

The material is gray stone—random masonry of large, seam-faced rocks, affording a smoothly finished wall of vari-colored elements, some of the pieces being delightfully iron stained, while others are more or less agreeably weathered. The window frames are of wood and the portico is topped by a wooden balustrade of solid panels. This, in turn, is crowned by a broad dormer, which is in fact a secondary gable repeating the primary motif, and setting forth not only a similar round window, but a pair of doors which open into the attic. The front door is simple in design but admirably proportioned, and has both fan and side lights. The side door is still more unpretentious, but has been made specially attractive by the addition of a small porch projected on two columns, the roof and ceiling of which again repeat the curves of the gables. This curved form has, indeed, apparently been made the dominant



The End Walls Are Surmounted with Curved Gables that Give the Form to the Porch Below



This Stately Stone Mansion, Built About 1814, Was Taken as the Model for the Rhode Island Home at the St. Louis Exposition



Each Bedroom Has Its Open Fireplace, Deep Window Seats and Four Posters with Contemporary Hangings

decorative feature of the design, and its skilful adaptation is what without question makes the building of note. The union of the double curves after this unbroken fashion is unusual, but their flowing lines have been admirably utilized, and nicely contrasted with the horizontal and perpendicular. Tempering the severity of the design, they do not impair its strength. There is an air of dignified reserve about this mansion which is somewhat characteristic of the houses of its period, and yet it will be noted that its general aspect is one of genial domesticity. Its frankness and fine proportions give it an expression of permanence and repose; its grace and setting lend it inviting hospitality. Standing among the trees partly vine-clad, it seems withdrawn from the present and allied to the past.

This impression is strengthened rather than dispelled by crossing the threshold, for not only is the interior design good, but the furnishings are appropriate. Both Mr. and Mrs. Talbot are fortunate in the possession of furniture which has been in their families for many generations and was originally well chosen. Mr. Talbot's great-great-grandfather was Commodore Silas Talbot of Revolutionary fame, and one of Mrs. Talbot's direct progenitors was General Persifer Frazer who, it will be remembered, served in the same epoch-making war. From both of these ancestors have been handed down many interesting and valuable relics. To these, with a keen appreciation of what is worthy, Mr. and Mrs. Talbot have added from time to time as opportunity offered so that their home is furnished now throughout in a characteristic manner.

Like the home itself there is no ostentatious show, but rather quiet reserve and real excellence. Because a thing is old, or has at one time been in the possession of a distinguished person, it is not always charming, but the furniture-makers of modern times have not in many respects equaled those of Colonial days, and it is true that the china, the silver, the woven fabrics and even the pewter and brass-ware of that

period are apt to be more artistic and attractive than later productions. There was a placidity in those times—characterized by the stagecoach and fraught undoubtedly with many inconveniences—which seems to have influenced the products of the craftsmen, for a calm, purposeful sincerity is shown in all their works. It is delightful, therefore, to discover a home wherein this atmosphere is preserved; to find passing from room to room all in harmony.

The entrance hall at "Hearthside" is wide and divides the house. To the right it opens into the library, and to the left into the drawing-room, while at the rear it leads into an entry from which the dining-room, living-room, and kitchen are directly approached. The stairs, as in many houses of this period, have not been made a special feature, but, partly concealed, wind through a well to the second story. The front rooms are large and almost square; the ceilings are moderately low; the windows deep set and supplied with inside folding shutters. In the bedrooms there are window seats somewhat quaintly fashioned,

and throughout the house the moldings are simple and attractive. There are open fireplaces in all the principal rooms, and the mantels are, for the most part, those designed originally for the house.

In the hall is an old, carved oak chest which belonged to Mr. Talbot's mother's family, and was made prior to 1700, and in the drawing-room will be noted a center table which is likewise over two hundred years old, a winged chair and other pieces of furniture which are interesting heirlooms. The library is in itself, perhaps, a more attractive room, with cheerier light and more livable aspect. There before the fireplace is found a rocking-chair and round tea table which are of Colonial design besides a fine old desk which has a child's counterpart of equal interest and antiquity. The dining-room, too, must claim attention, as well for its contents as for its pleasing proportions. On the sideboard stand General Frazer's knife, fork, and spoon cases, while in one



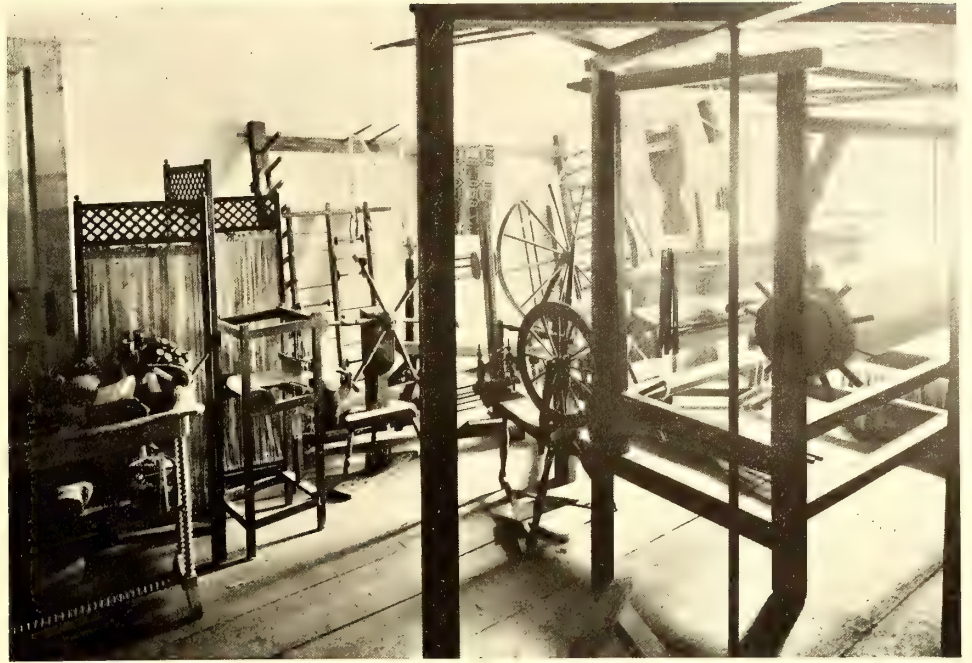
The Drawing-room Is Furnished with Old Furniture, Much of It Family Heirlooms of the Present Owner

corner is a "beaufat" which belonged to his mother. On the walls are family portraits, and grouped over the fireplace with its swinging crane are to be seen a number of quaint old silhouettes. Those who are interested in china and its collection would find much to delight them here if not to tempt and tantalize; for arranged in the several glass-faced cases are sets of Lowestoff and Nankeen, as well as many rare individual pieces. In the small side hall on shelves are assembled the pewters and brasses, and over the front door stand now, as of old, the fire buckets belonging originally to Mr. Talbot's great-grandfather.

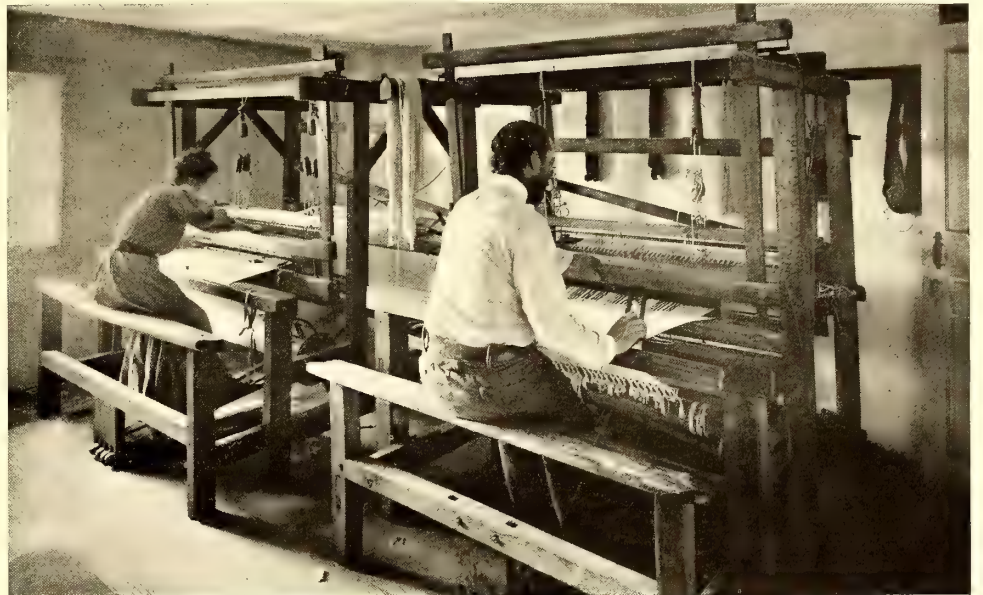
On the second floor the interest is equally sustained, each room having its open fireplace, deep window seats, four posted bed with contemporary hangings and other antique furnishings, but it is not after all until the attic is reached that the chief attraction of the old place is found or its true spirit entered into. There are the looms, the spinning wheels, the warping-frame, the reels and the hackles which at one time were counted as household necessities and are now, after almost a century of idleness, again being put into use. As in the attics of tradition, the roof is low and slanting and under the eaves are chests. The windows are deep set and vine curtained, the sunbeams dusky, and over in the corner is a door opening into the smoke chimney, cavernous and sooty, wherein, on hooks, hung in the "good old days" many a savory ham and side of beef and bacon.

This top story is divided into four rooms, three of which are given over to the weaving industry. In the larger of the front rooms are the heavier looms used for the coarser weaving, and here is the great attic dormer leading up a short flight of inside steps to the portico's roof and platform. When these doors are open great floods of light flow in, and the outside world itself seems almost to gain admittance. Its shape, its light, and its environment make this room an ideal artist's workshop—a place wherein it would be difficult to produce unlovely things.

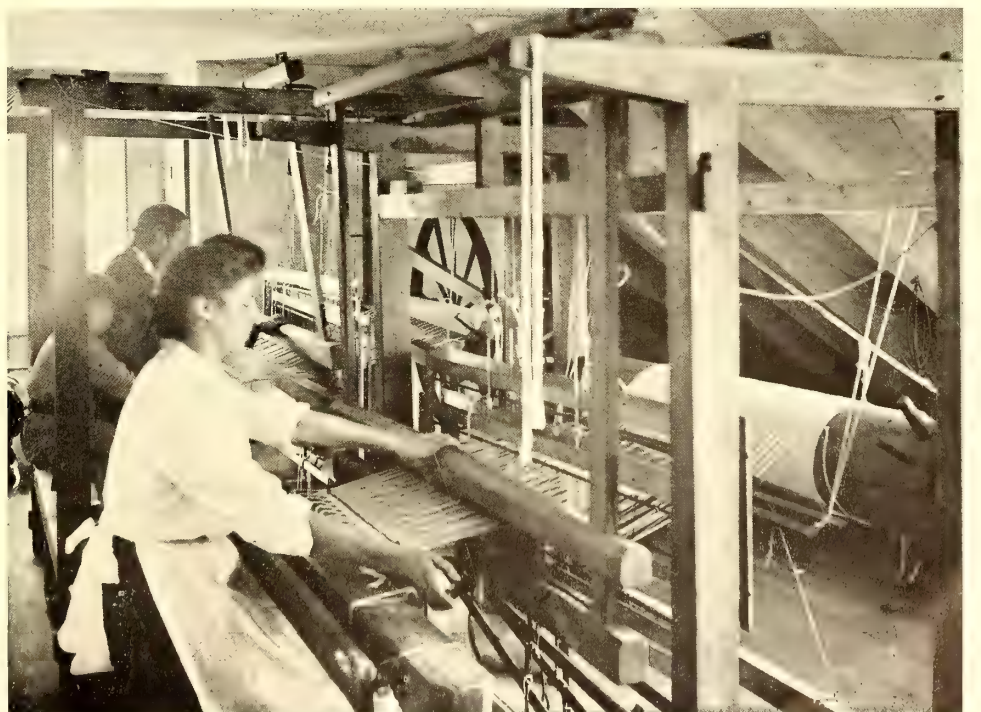
About two years ago, on an idle evening, Mr. Talbot and his wife took out a small hand-loom, which had long been unused, and began experimenting with it. So successful were they at the start, and so interested did they become directly in their new-found occupation that ere long their past-time became an absorbing business. The industry in fact almost evolved itself, and scarcely before the workers themselves realized it they were obliged to seek helpers and procure other looms. Then ensued an interesting search. In attics, wood sheds, and cellars the old frames were found with their splendidly seasoned wood and strong joints thought fit for nothing but chicken coops or burning. Eight have now been restored to their own, rejuvenated, and set up in the "Hearthside" attic. At these a little band of weavers (the owners and



In the Attic Are the Looms, Spinning Wheels, Warping Frames, Reels and Hackles Long Counted as Household Necessities



Mr. and Mrs. Talbot Weaving in the "Hearthside" Attic. Mr. Talbot's Loom Has Been in His Family for Over a Hundred Years. Mrs. Talbot's Was Made in 1725



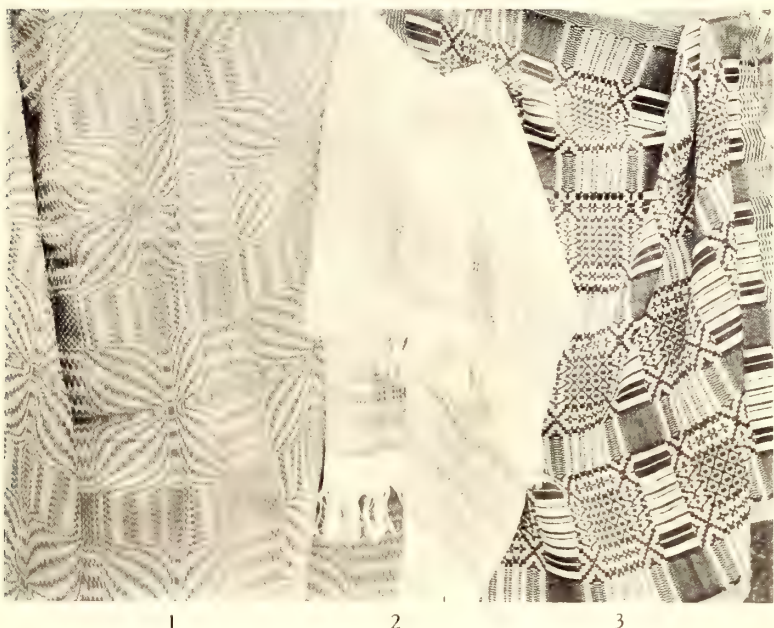
Weaving in the "Hearthside" Attic

some native helpers) sit day by day producing a great variety of art fabrics in cotton, wool, and linen. Their flax is spun for them in Ireland, as is their cotton and wool here, and all are dyed at a neighboring town by a man who has had the secrets of certain colors handed down to him from his grandparents.

Interesting, indeed, is it to see the looms in operation, to watch the shuttles passed back and forth and see the pattern forming and the fabric growing; interesting to see the warp wound on the great, gaunt, upright, revolving frame, then braided and made ready; or even to see the skeins of bright colored yarns awaiting in separate rows and boxes transferred to the busy shuttles. But more interesting still is it, with this in mind, to examine the finished product, note its variety, its perfect workmanship and intrinsic charm. There are rugs made after the manner of rag carpets, bedspreads and curtains made in the fashion of those of our great-grandparents'



Cotton Rugs From the "Hearthside" Looms



"Hearthside" Products

- 1 Double Bow-knot Bedspread. 2 Linen Table Cover
3 "Governor's Garden" Table Cover

time, pillow and table covers of cotton and silk, linen for dress patterns and for towels, scarfs for bureaus and pianos, all woven simply and yet exquisitely. Silk and wool have been combined, mercerized cotton much employed, and different effects produced by a changing of the warp as well as the woof. Many of the designs, such as the "Governor's Garden," "Sun, Moon, and Stars," "Solomon's Delight," "New Hampshire Beauty," "Orange Peel," and "Double Bow-knot," have been copied accurately from old samples, but others have been originated and applied. All are produced by a mere variation of lines and spaces, and are entirely

conventional. Their color arrangements are exceedingly pleasing, and their decorative feeling most pronounced.

Both Mr. and Mrs. Talbot had a certain amount of artistic training before they turned to this industry, which with inborn taste and natural inclination undoubtedly furthered their success; but they brought to it besides, perennial interest and unflagging enthusiasm and these manifest themselves in the spontaneity of their work, and infect, most happily, their helpers. They are not the only workers in this field; what they have done others can do and are doing, but there is something peculiarly delightful about the environment in which their industry is carried on—something notably attractive in the art of their productions. The spirit of such work is that which animates the arts and crafts movement—a return to the day when the workman took pride in his product and good taste prevailed. The old house, its antique furniture, its quaint attic and busy looms together with its hospitable and contented indwellers seem closely akin, and while harking back to the past point to a better way for the future.





A Timid Canadian Deer



Japanese Lilies Grow Luxuriantly on Many Trails

The Lure of the Trail

By Katherine Louise Smith

NOTHING can be more entrancing to the mountain lover than to follow some friendly trail, to ascend the lower slopes of the great hills and minor mountains, or to scale some height which towers its mighty head far above the surrounding peaks. There is a fascination about a mountain trail that brings joy to the soul of the would-be Alpinist, whether he wishes to win honor and glory by making a first ascent or to enjoy the leisurely climbs which are safe for the ordinary traveler, and can be attempted by any good walker. Thousands of these trails, the best in the world, exist through the Canadian Rockies and British Columbia, which woo with

their cliffs and cañons, deep, green forests, and peaks crowned with eternal snows.

The trails that penetrate the mountains are not ordinary highways. Through the valleys of the Rockies they were originally made by Indians, and many are supposed to date from the period of prehistoric man. Who can say what scenes a trail has witnessed—what stories it could tell? Long before the coming of the white man these trails in the Rockies were used by the Kootenay, Stoney, Blood, and other Indians who took hard journeys to barter their furs for beads and the gewgaws of the white man. It is a delight to follow such a narrow path wherever found, whether in the States or the Canadian Rockies, but it is especially so in the latter, for

they have been little explored and they represent, in majesty and snowy caps, the sublimity of the great American ranges. Many a narrow pathway one can follow, worn in places by the hoofs of horses, clearly marked in open meadows, always winding to avoid some obstacle and peeping out when least expected on some avalanche track or steep cliff. Perhaps a deserted bear cave by its side shows where Bruin has had winter quarters, or the friendly porcupine almost blocks all progress. All suggests the rapture of a new discovery, and even a well-worn trail affords delights to those who have not tried the intricacies of the little used mountain pathways.

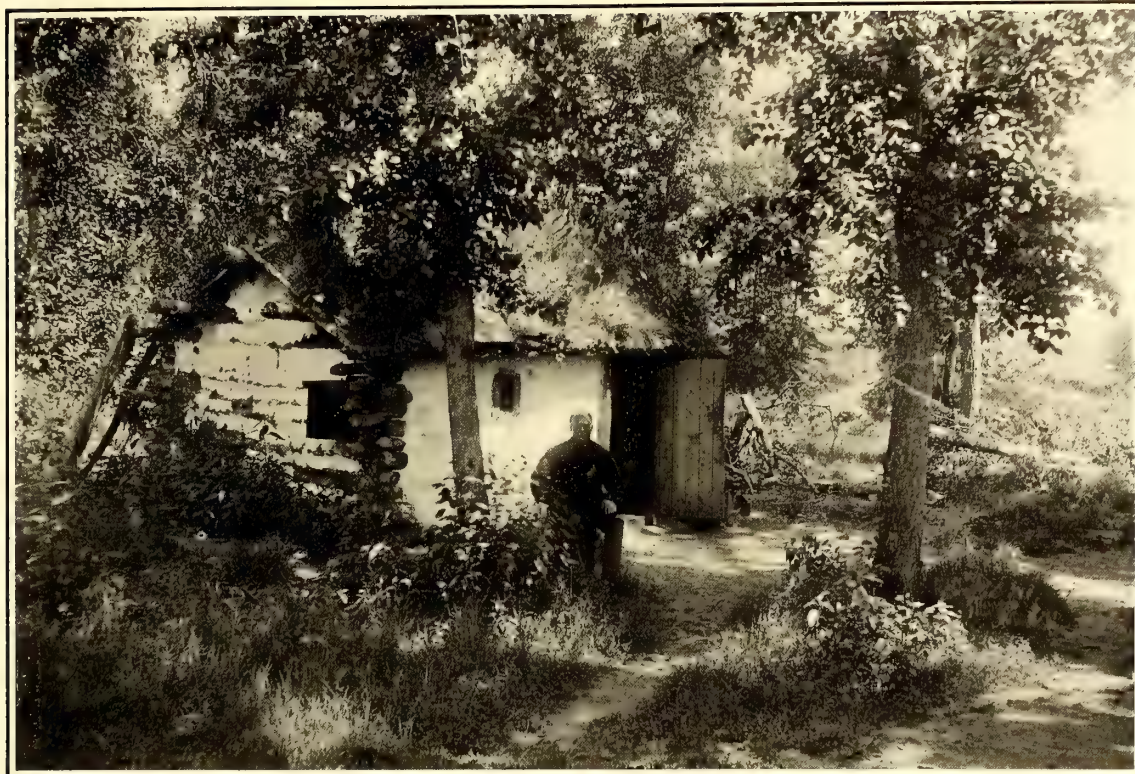
Some of the trails are practicable for horses but



Kootenay Outlet, from Pilot Bay, British Columbia



Cathedral Peak, from Mount Stephens



A Hut on the Trail, Not Too Far from Civilization

usually for only a part of the way, for a genuine trail is subject to constant degeneration. Often avalanches and trees blow over it, and whole stretches will be covered with broken rock. At other times it shows the blasting effects of some winter snow slide, which in the northern Rockies comes with such force that bridges are swept away long before the avalanche reaches them. Often mountain streams change their course, and in this way alter the trail, and in the forest the underbrush will grow so rapidly that the pathway will be choked. Many times the trail is blazed, but more often no tree is cut and one scrambles over dead monarchs of the forest which have fallen across the pathway and on which tender lichens and green moss are beginning to grow.

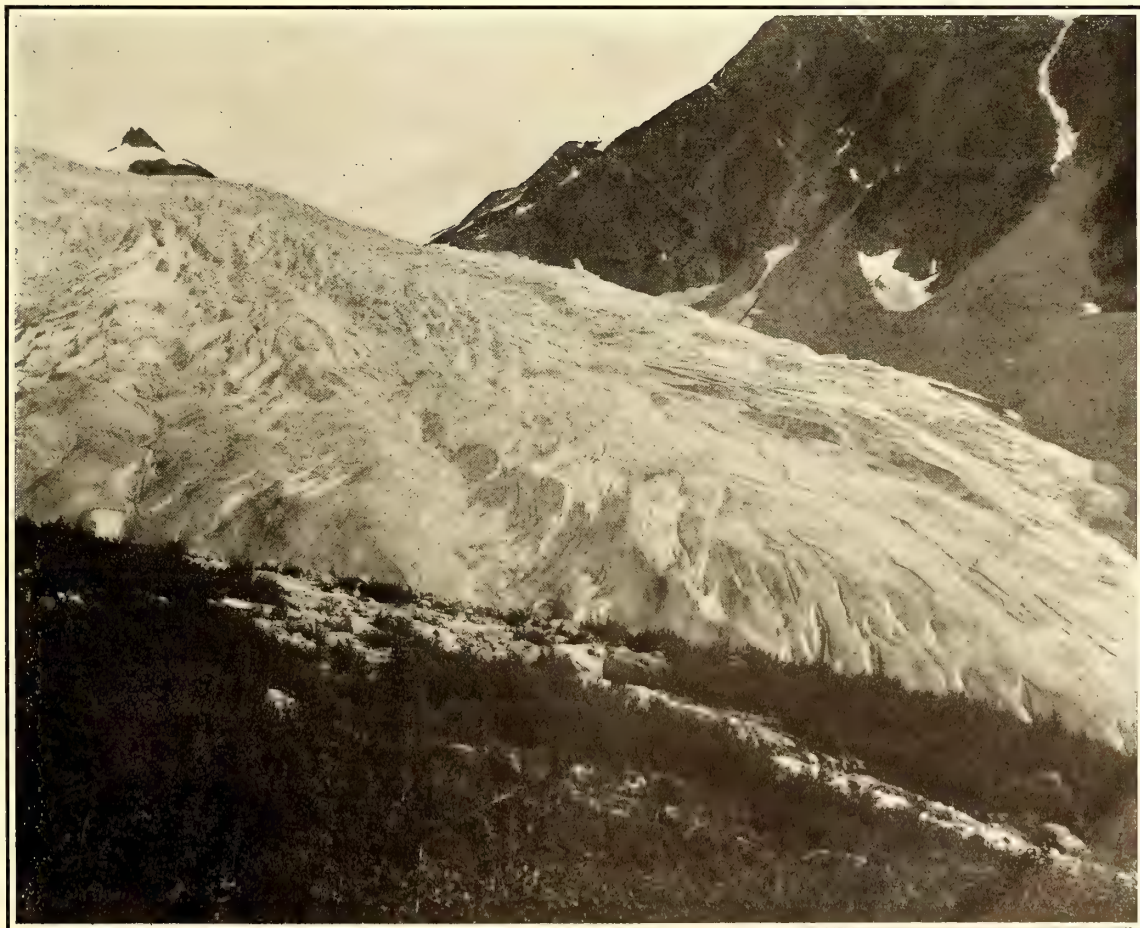
They are alluring features of the open, these trails which lead to glorious cliffs and cañons, through pine-scented forests, where the birds sing sweet antiphones, and the sun dances gaily through the occasional clearings. Whether one attempts to scale such tremendous heights as Mt. Stephens, Mt. Sir Donald, or Cathedral Mountain where trained guides are necessary, or takes such minor climbs as the trails afford in the Yoho Valley, Saddleback Mountain, at Lake Louise, or the mountains of the Kootenays, the traveler finds a variety of grand scenery, from icy glaciers to fern-dressed cañons, from torrential cataracts to purling brooks. One may climb

by sharp pinnacles and fantastic pilasters, and in the blue surface of some mountain tarn see the reflection of magnificent peaks or gather the flowers that love the heights, those trophies of the mountaineer which bloom in sheltered spots.

Chief among the charms of the Canadian Rocky trails are the abundance of wild flowers. Around Emerald Lake, near Field, a charming greenish-blue sheet of water, the trail leads through tall spruce trees and in a half hour, on and near it, twenty-five different varieties of blossoms have been gathered, a wealth of beauty that makes the ground seem like an Alpine garden. There are delicate moccasin flowers, heliotrope and yellow; gorgeous fields of

painter's brush; a wild species of Solomon's seal; forget-me-nots, white and blue; large beds of yellow violets; the Oregon grape that carpets the ground with rich color; the arbutus and yellow columbine—a goodly array that delights the heart and refreshes the weary climber. To follow the trail around the Lake and into the Yoho Valley and to stoop and pluck the wayside flower, or make a short detour in search of floral beauties, are delights worth miles of travel.

Often on a desolate stretch where the avalanche has swept the forest trees away, a multitude of forest flowers will brighten the trail and lend a charm to what otherwise



A Great Glacier in British Columbia



Emerald Lake, British Columbia. Twenty-five Varieties of Wild Flowers Have Been Picked Around this Lake

would be bleak and barren. Most common among these is the great mountain anemone, with rigid white petals and lavender-tinted heart. Its leaves are punctured with a fern-like tracery, and so early does it come that it touches the melting snow banks, and sometimes is completely surrounded by the cold, white blanket. But the morrow's sun always sees the folded bud opening toward the sky. Late in the season it sends forth great tufted bunches of seeds whose tasseled heads wave several feet above the ground. The delight of gathering such flowers in a world apart, in a solitude among the eternal hills, is enhanced when one remembers that every spot in these towering Rockies has its characteristic plants, according to the nature of the ground, its exposure and altitude, and that many choice specimens can be transplanted. For instance on the trail leading from the chalet at Lake Louise, one may find yellow violets and fragrant lady's tresses growing on the low shores wet from the cold springs underneath; and a little further on the same easy trail is bordered by the scrub birch, whose long black catkins can be seen some distance away.

Many an unnamed flower can the botanist find in these secluded trails, either on flower-bedecked meadow or on the winding pathway that skirts some dark, forbidding cañon. Sometimes the bluebells peep from banks of ferns, and in other spots the gentians bloom in sheltered nooks or around some mountain-girt pool, ready to be plucked by the intrepid mountain climber. A tangle of heather-like plants dot the mountain sides, but so far no Swiss edelweiss has been found, though conditions are much as in Switzerland. Instead are the antennaria and bryanthus, the last with purple blossoms, which grow on the high reaches of the tallest mountains. By the side of the most frequented trails and wagon roads can be plucked the greenest orchids and red-tinted laurel, while in the retirement of the leafy forests the white-flowered rhododendron grows with its bell-shaped flowers which cluster in huge bunches in July. No matter how lonely the surroundings, these flowers cheer the pathways as they sway in the breeze.

On the rich black loam of these secluded trails thrive the scarlet painted-cup and the magenta-hued epilobium. So plentiful is this last that it makes a riot of color especially welcome on the burnt-over timber lands where it grows many feet high, adding another touch of beauty to the mountains whose color transformations are exquisite. But the most charming of all the flowers of the Canadian Rockies to botanist and layman, to the Alpine climber and amateur trail lover, is the yellow erythranium grandiflorum. When the insects and butterflies hover over it, it forms a picture that is never forgotten, not alone because of its beauty, but because



Indians on the Kootenay Trail

in its efforts to reach the light it has been known to pierce solid ice four and five inches thick. There are few sensations more delightful than to climb an Alpine trail to the brink of some icy glacier, and see, struggling to peep forth, these beautiful yellow flowers, which in a few days may rise triumphant from their crystal bed. These flowers may be picked near the Illecillewaet glacier, but it is worth a much longer climb to gather them.

One charm about these mountain trails is that so many of the valleys have not been searched for specimens, though botanists are at last becoming aware of this new field and some of the plants have been taken to Swiss and German gardens. Far away from the trails what possibilities await the explorer, for every new valley that is opened abounds in specimens? Besides the floral possibilities the Nature lover soon learns to know the trees. He may select the springy balsam boughs for his couch, and when he has counted the rings on the white spruce, which often

attain the age of six hundred years, he feels he has indeed discovered an antiquarian. He may pluck the greenish-red flowers of the Douglas fir, which often in British Columbia makes a forest a thousand miles in extent, and may make his camp fire of aspen poplars. If he selects June for his climb he may see the most interesting of all the trees of the high Rockies, the Lyall's larch,



A Trail Acquaintance

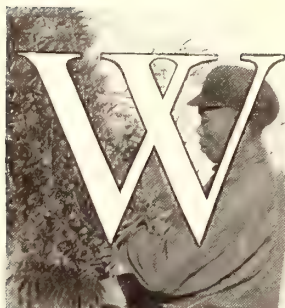


Photographed on the Trail

(Concluded on Page 119)

Life on An Olive Ranch

By Charles F. Holder



WHEN the wild olive was discovered and under cultivation turned into the olive of to-day is not known. Its history in this country is fairly well known. In the seventeenth century it found its way from Europe to Mexico. When the splendid chain of Missions was begun on the Pacific coast the padres planted the olive.

It found a home in congenial surroundings and groves of olive trees sprang up from San Diego to Santa Barbara, many of the old trees still standing about the ruins of the old buildings. They seem to blend well with long corridors, tiled roofs, and the rich tones of adobe in the shadow of the cross. The exact date of the coming of the olive to Southern California was doubtless 1769, when an expedition sailed from San Blas, Mexico, and one José de Galvez saw that the vessel was provided with "seeds and plants." The olive was first planted at San Diego Mission from the Galvez supply, and from these grew the tall, willowy, graceful trees known as the Mission olive.

Little wonder that men and women in Southern California are fascinated with the olive. It has an aroma of Araby the blest, of the Orient, and there is an estheticism about it that lures men on to cultivate it, whether there is profit in it or not. Your true poet scorns return in lucre, so I fancy do some olive men I have met.

One of the padres at the Mission of Santa Barbara was showing me the olive grove one day—a genial, kindly man, with a fund of wit—and as we strolled up to the Mission and parted he said that "all the olive men who were success-

ful were artists. Their homes were beautiful, they had the poetic nature," and then he told me of "Elwood," and the day following I rode out of the old Spanish town, by its lofty mountains the Sierra Santa Ynez that stand smiling at the sea, and found my way out into the country, in search of the most beautiful olive grove in California, where the padre told me olive oil was made, each drop of which was like amber, the nectar of the gods.

I rode on up near the mountains, along fine groves of trees, the blue ocean always in sight, the islands of Santa Cruz and Santa Rosa resting in the water off shore, and came out at Elwood with its splendid groups of eucalyptus and oak backed up against the hills. In all probability this is the most picturesque and attractive olive orchard in Southern California—certainly one of the oldest of the modern ones, dating back as it does to 1870. The orchard is the result of much experimenting. It was found that olives could be raised more quickly from clippings than from seeds. In four years Mr. Elwood Cooper produced a crop from his clippings. To plant seeds would have taken twice as long.

The olive seems to thrive here in any soil as the big ranch has all kinds and conditions from heavy adobe to sand, the higher elevations evidently being the most favorable, but not over 3,000 feet. The trees which form the splendid grove of Mr. Cooper came from the old Missions of San Diego, San Fernando and Santa Barbara, and the view up the long street or avenue in his orchard, lined on either side by hundreds of olive trees, is one of the interesting things in California.

It has been found here that a regular, even temperature is best suited to the olive, and the situation of Santa Barbara with its splendid climate, about the same the year around, is



A View of a California Olive Ranch



A Glimpse of the Ranch House and the Garden

well adapted to it. It would be interesting to trace an orchard of this kind from its inception to bearing, and we shall doubtless find that it is not all *couleur de rose*. There are pests which prey on the olive distracting to the grower, and a variety of troubles and annoyances which must be expected in any business.

In planting, the olive rancher has arranged to have his crops come at different times, this being rendered possible by using different varieties. The trees grow rapidly, and in four years the first crop comes, and in the fifth more, and after that the tree may be said to be at its best for many years. The olives with which the East is familiar are, as they appear, green—picked before they are ripe for pickling, and considered a great dainty, but the Californian considers the black, dead-ripe olives the best eating, and while the taste is an acquired one it is soon established.

When the time for picking comes, the grove, orchard, or ranch, has an especial interest; gangs of men, Indians, Mexicans, or Chinamen, gather and proceed down the grove. Long ladders enable them to reach the higher trees. Each man has swung about his neck a canvas bucket, flat on one side to fit his body, as the olive must not be injured.

It is even picked with both hands. When the bag is filled the picker descends and empties the berries into a box. They are then placed in a fanning mill which removes

all dirt or dust. Cleanliness is the watchword in all olive culture. The pickers make rapid headway, and soon hundreds of gallons of berries are picked. The observer will notice that during all the picking four different stages have been picked—green, reddish, ripe, and dead ripe. Those for pickling are hard, but of full size, and are placed in vats half full of water. From here they go to the pickling vats, a somewhat delicate operation, if the rich green tint of the olive is to be preserved in all its purity. This accomplished they pass on to the bottling department. The pickling of the dead ripe olives is another process requiring great care.

In December, or when the olive begins to assume a purple shade—or reddish purple, it is considered ripe enough to pick for the oil. At this season one may see the same general process which was in vogue a thousand years ago—namely, the crushing of the olives. The olives are allowed to remain on the trees until the last moment as

they then produce the maximum amount of oil; this gives quantity, but for the finest oil the maker picks the olives sooner, or when they are hard. All the old Missions had their crushers, and some can be seen to-day. The olives are now arranged in trays through which the air can circulate, to remove a part of the moisture. Then they are ready for the mill, which is a big wheel of iron or stone worked in a stone or iron basin by man or horse in former years, now by steam.

The mill is charged with about three hundred and fifty pounds of olives, and like the mills of God it grinds slowly. The pulp is placed in tubs, the staves of which are narrow and a short distance apart. Pressure is brought to bear upon this. The resultant oil, the first or virgin oil, is the best. The pulp is taken out, replaced and pressed again, producing a second grade, and there may be a third or fourth grade. This is a most interesting operation, and the perfume, or the bouquet, is delicious. The entire work is immaculate; dust, foreign odors, anything likely to contaminate the oil being carefully removed.

The absolute purity of the oil, and the care taken to produce it, are nowhere more admirably exemplified than in the filtering room. The oil and some pulp are caught in tin tanks where the oil rises to the surface, and like cream is skimmed off and poured into settling tanks, where it remains



Measuring the Olives



Gathering the Olives

for sixty or ninety days, after which it has thrown off all impurities. It is then made to pass through a filter of felt and cotton batting, and from this thick, pure white bag, the oil of commerce, liquid amber, drips and drips. One can hardly

At Elwood, there are six or seven olive orchards in various kinds of land, some in black adobe, some in loam, others in sand and loam and at different levels. In this way olives are made to ripen at different times, but the difference in soil does not appear to affect the grade of the oil. Those who are familiar with certain imported oils will probably not like the California product at first. The reason of this is, that they do not know what pure olive oil is, certain importations being made of cotton seed, or diluted with it, but the California oil is the clear, pure essence of the olive.

Elwood is by no means the only olive orchard in Southern California; it is merely a very old and beautiful type with charming environment. Some large groves are to be seen at Pasadena, at San Juan Capistrano, and with the great valleys down by Santa Ana, California will soon be able to supply America with pure olive oil and the best of olives.

There are now in the state two million five hundred thousand trees planted, each tree producing theoretically two hundred and fifty thousand pounds of olives. What this means is readily seen. Making a very conservative estimate, allowing a crop every other year, and twenty per cent. for unseen losses, we should then have two hundred and fifty million pounds. Assuming that one-half of this is pickled and dried, and we have four hundred thousand barrels of fifty gallons each, or six thousand carloads.

The balance if made into oil would produce one million cases of twelve bottles each, or two thousand carloads. The use of olives and olive oil in America is restricted to the rich, when it should be used by all classes. In California the pure oil is used almost exclusively, and few green olives are used, the black, ripe ones being considered more delicious.



Chinese Picking Olives

conceive anything more beautiful than these pellucid drops. But this does not satisfy the oil maker. He forces it again through chemists' filtering mats. Clear, and absolutely perfect, it goes to the bottler. I shall always remember the sweetness of this room, into which it seemed a profanity to walk with shoes, the slow drip of the amber-like oil, the delicate aroma, something quite different from anything else, suggestive of the poetry of the olive and its culture.

Kitchen Furniture

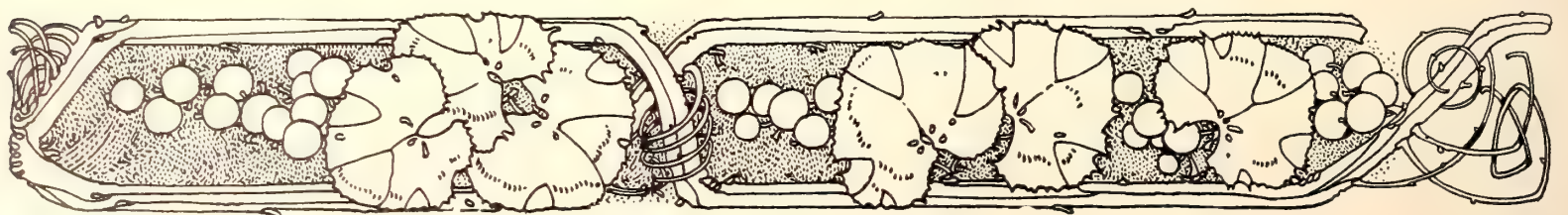
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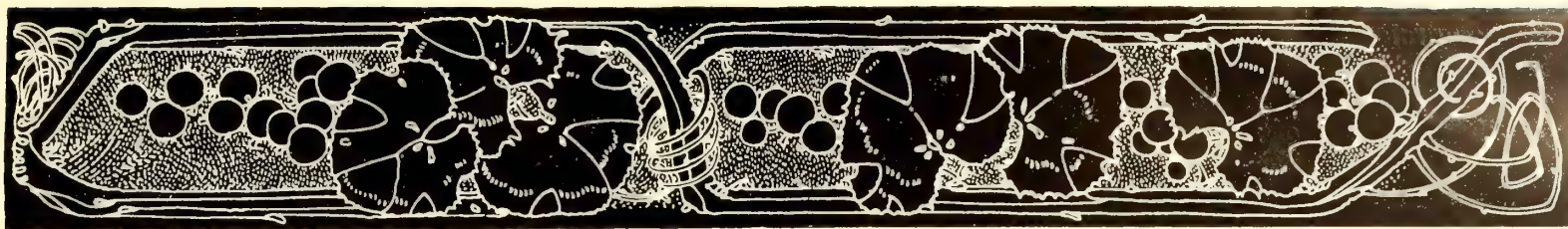
moved they gather dirt instantly and they offer endless temptations to hang things up over night, convenient enough so long as no damage results, but an exceedingly dangerous and pernicious practice.

Chairs constitute the final indispensable articles of kitchen furniture. Once more space decides the kind and number, and in many apartment kitchens the area is so small that room can be found for no chairs at all. But a kitchen without a chair is a difficult apartment to work in, for chairs are really needed for much kitchen work, and they certainly ease many forms of labor. This in itself is an important element, for the kitchen is the workroom of the house, and everything which tends to make the work easier and lighter is a distinct gain to the whole household economy.

Rocking chairs are, of course, not needed and should be

omitted. They are sometimes placed in large kitchens, but houses which contain such large kitchens should contain other space in which a rocking chair will be better appreciated by the servant than if it is placed in the kitchen. Stuffy chairs of all sorts are also prohibited and are quite useless. This reduces the chair problem of the kitchen to the simplest form, only plain wooden chairs being thus available. If there is not much comfort in these it should be remembered that the kitchen chair is not intended for comfort, but as an assistant to work. If there is room for several chairs, those of different sizes and heights will be found better than all of one kind. A plain office stool is also frequently available and useful, although it adds one more article of furniture to a room which really has little enough space without it.





The Flower Doctor

By S. Leonard Bastin



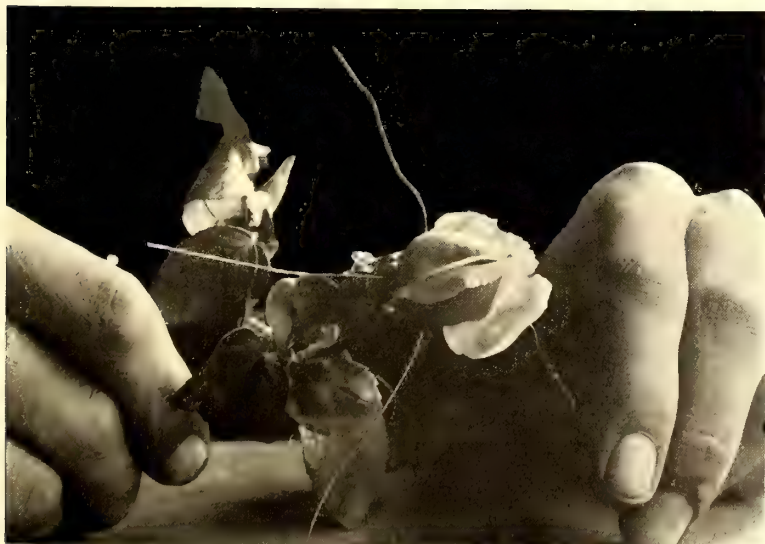
THE discovery of the commercial value of flowers is one of the most remarkable developments of our times. Even the advanced gardeners of a century ago had not the faintest idea that one day huge industries would spring into being, having for their sole object the culture and marketing of blossoms. As one would expect, the appearance of this floral enterprise has led to the creation of many positions for those who specialize, which otherwise would never have seen the light of day. Quite the most remarkable of these novel vocations is that of the flower doctor—a man, or not infrequently a woman, who gives his or her whole time to the handling of blossoms with a view to making good any imperfections which they may possess.

Nature is quite perfect in her ways as a general rule, the flower doctor readily admits, but even she will sometimes make mistakes, and quite often will be all the better for a few touches from his skilful hand. Of course the very first principle of this curious art is concealment; the work must be done so well that no one can discern that it has been done at all. Flower doctoring is very much more widely practiced than might be supposed, and it speaks well for the skill of the operator that so few people are even aware of the existence of his strange profession. In the present article it will be the endeavor of the writer to give the reader a little peep behind the scenes in a modern flower growing establishments.

To begin with, the flower doctor, no less than his namesake in the medical profession, must have his case of instruments. These are much like a portion of a surgeon's stock

in trade; delicate pairs of dissecting scissors, forceps of all shapes and grades, cutting pliers in addition to a host of brushes in all sizes. There are also a number of accessories the use of which will become apparent when the flower doctor is seen at his work. The whole paraphernalia, which makes quite a formidable array, includes spray producers, and bottles containing gums and scent essences.

The most ordinary duties of the flower doctor consist in simply correcting imperfections in the flowers which are placed in his hands. A great box full of freshly gathered rose buds is brought in to him. Many of these are not quite as they should be. A withered, or perhaps a badly developed petal spoils what would otherwise be a perfect flower. With a pair of forceps in his deft hand the doctor rapidly goes over each bloom. This petal which is out of its place is put into a right position; that ill-shaped one is torn away altogether. In the end the flower is placed aside without the least blemish to detract from its market value. If the roses are wanted for some purpose where it is important that the buds should not open, such as for use in a bouquet for instance, each bud must be separately treated. As near to the base of the bloom as is possible, thin wires are cunningly inserted right through the center of the bud, so that all the petals are held in such a way that they can never fall apart. All other kinds of flowers are examined in the same manner as has been described above, faulty petals removed and displaced ones put into the correct position. It is not at all an unusual thing in the case of chrysanthemums, to go over the flower with an instrument much resembling a pair of curling tongs, and with delicate twists bring the petals over in an elegant curling fashion.



Wiring a Rose to Prevent It from Opening



Freeing a Chrysanthemum from Injured Petals

Some of the most desirable flowers, from the florist's point of view at any rate, have been provided with only very weak stems, and sometimes with scarcely any stem at all. The beautiful Marechal Niel rose can scarcely hold up its head, while the fragrant white tuberose blooms by the time they have been gathered from the central stalk have not more than a fraction of an inch of stem. Such flowers could never take their place in decorative schemes in the condition



Removing Imperfect Petals from a Carnation

in which Nature has given them to us. But your flower doctor can easily get over such trifling difficulties as these. With metal thread the weak stems are strengthened, often in such a way that it is impossible to detect the supports, and the blossoms without stems are provided with ones made of stout wire. All this is done so cleverly that by the time the flower takes its place on the dinner table, or in the bridal bouquet, no one can say that the bloom has received any attention from the hands of man at all.

It has been held that to attempt to give scent to the rose is an undertaking which is altogether ridiculous. Nevertheless the flower doctor does not view the matter at all in this light. It is a sad fact that many of our modern strains of one time fragrant flowers are more and more woefully lacking in sweetness. Some of the most lovely varieties of roses, the finest kinds of violets, are almost scentless. This will never do for the florist; buyers expect their roses and violets to smell pleasantly, and if Nature does not provide the wherewithal well, the deficiency must be made up somehow. And it is just here where the spray-producer comes in so usefully, hissing out its sweet vapor in response to the ball pressure over the fresh blossoms. It is only fair to say that the doctor is very careful to use only the finest scent, which, of course, has had its origin in flowers, and is a natural product. He is also most particular in selecting the right kind of fragrance for each bloom, so that the fair lady who buries her nose in this bunch of violets has not the least conception that the purple blooms have been tampered with in any way. Of course good scent is so permanent that its odor will remain quite as long as the flowers last, and often much longer, making folk wonder at the delightful fragrance of the modern blooms even when they are dead.

One phase of the flower doctor's work it is not easy, for a person who loves blossoms as Nature made them, to write of without protest. This will be seen to be nothing less than sheer mutilation for which there is really little excuse. There are certain purposes for which it is considered very desirable that the flowers used should be entirely white. Popular favor has declared that as a general rule the blossoms used for church decoration, and in the composition of wedding and christening bouquets, wreaths, etc., must be of spotless purity. To this end your flower doctor performs a cruel operation

on the lovely white Easter lilies. As is well known the blooms of these lilies produce anthers to their stamens, which are large and most plentifully supplied with golden pollen. This golden dust as it reaches maturity is apt to fall off and sully the white petals, and in order to prevent this the expert just as each bud opens, carefully removes each anther with his forceps, with the result that the lily is shorn of a good deal of its natural beauty. Perhaps even a worse instance of this mutilation is seen in the case of the Poet's Daffodil (*N. poeticus*). The charming crimson eye in the center of this flower stands out in fine relief against the snowy ring of petals, but in such a state the florist will have none of the flower, if the purpose demands a white blossom. A dreadful deed again must be accomplished by the doctor. With a delicate pair of scissors the brilliant bordering of scarlet is trimmed away from the cup, and one of the loveliest of the *Narcissi* is divested of its most attractive feature. This is flower surgery at its very worst, and it is not easy to justify such practices; indeed, it is much to be hoped that ere long these methods will be held to be outside the legitimate work of the specialist. There is all the difference in the world between providing a flower with an artificial stem and cutting away its petals, and by so doing destroying most of its natural beauty.

It seems a strange thing to talk about sticking flowers with gum, and yet this is a very common practice in the florist's workshop. All the lovely azaleas in pots which delight our eyes during the spring months have been doctored with a vengeance. Azalea blooms drop very quickly, some time before the petals of the flower really begin to fade, and were it not possible to fix the blossoms in some style or other the plants could hardly be marketed at all. In order to prevent the flowers from falling too quickly, at the joint of each stalk with the stem, a wee drop of gum is placed by means of a brush which when dry holds the flower firmly in position. As may be imagined the sticking on of azalea blooms is a process which is tedious in the extreme. Many fine plants will bear hundreds of flowers, and as each of these will require attention individually, it will be seen that the matter is



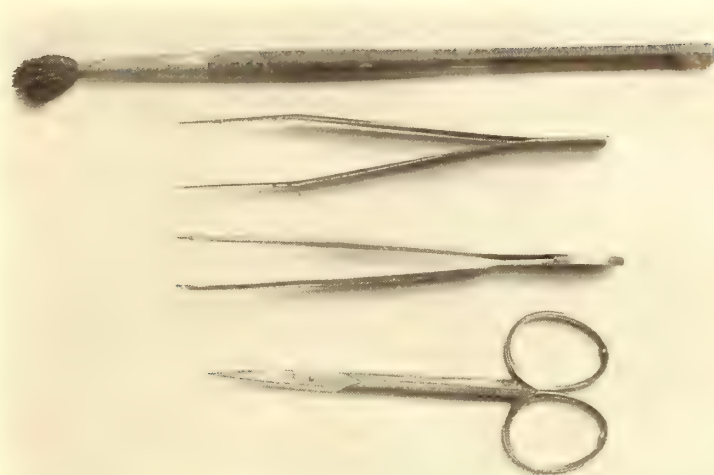
Securing Azalea Blooms to the Stems by Means of Gum

no small one. In the case of other flowers where it is known the petals are apt to be shed somewhat hastily, a touch of pure gum here and there will often very much lengthen the life of the blossom. If this has been done with proper skill no one need ever detect that the flower has been attended to in any way.

In most big flower stores a person with some knowledge of flower doctoring is usually retained. These flowers which look so fresh were really not picked to-day at all, nor is it necessary that they should have been; but they have



Spraying Odorless Violets with Artificial Scent



The Flower Doctor's Implements

been stimulated to hold up their heads a while longer by clever treatment. Although methods vary slightly they mostly consist in placing the stems of the flowers in very hot water for five minutes, and then putting them in a cool, dark cupboard for an hour or so. Just before the blossoms are placed on the display counter it is not an unusual practice to spray them over with clear spring water. This produces a

delightful effect of glistening dew drops on petal and leaf, which is bound to make the show pleasant and attractive in the eyes of would be buyers. After all it must be admitted that the flower doctor does very much to assist in the meeting of the great demand for blossoms, which it is safe to say, is one of the best desires which the public has evidenced for a long time.

The Lure of the Trail

Continued from Page 113

filled with tender buds, and note its scarred appearance from successive battles with the storm. He may even read the message which it brings, for this tree is never found below 6,000 feet sea level; but long before this the intrepid climber has been told how high he was from the kind of vegetation on his pathway.

Are there not charms in this? Yet these are but glimpses of the pleasures that await him "who climbs the mountains to get their good tidings." To stand in the valley and hear the guide say, "On that mountain side are acres of meadows on which are white mountain goats, deer, bear, and other animals; in another place are great beds of blue forget-me-nots; all along the trail are rhododendrons, bluebells, gentian, and foxglove. Shall I take you to it?" requires no answer. Early the next morning your feet brush aside the

dews of dawn on the start for the trail, that zigzags across the towering monarch's sides. A thousand beauties of Nature beyond power of imagination await. Perhaps the summit is reached by noon, and rest and luncheon taken in the shade beside some cooling stream, or days may be spent in penetrating mountain fastnesses, in viewing splendid ice work, chambered caves, crossing roaring mountain streams, skirting emerald-hued lakes, gazing over the brink of yawning cañons. No one will ever begrudge the time given to the trail. It is lifelong refreshment to the one who follows it, whether it be so tortuous that guides and ropes are necessary, or the easy pathway of some lower hill. Sparkling fall, flower bedecked meadow, all Nature's plentitudes are here, and man has but to open his heart for their transcendent glories to sink into his soul.



A Study of New Apples

By E. P. Powell



FIND myself wishing that I could reach apple tree planters and home makers with a bit of experience about varieties to plant. One of the worst disasters connected with country life is the very general ignorance concerning good fruit. I frequently have to search among farmers' stock for a few barrels of good lot to fill the orders of my customers that overreach my own supply. It is nearly impossible to obtain a first grade of fruit, well picked and rationally stored. They are hauled off the trees, tossed about and poured about, and then left in piles on the wet ground. Very few of even the better class of planters know anything about varieties beyond a half-dozen old sorts. Tree peddlers occasionally work in something new, but this stock is generally inferior. An encouraging symptom is a growing disgust for such worthless stuff as Ben Davis. I have grafted out and cut out every tree in my own orchard, and I hear in all quarters that they can no longer be sold even to Italian street venders.

I should like to recommend the following sorts as worthy candidates for a home orchard. Among the very earliest I should place Yellow Transparent and Liefland Raspberry as two very good croppers as well as fruits of the highest quality. These associated with Red Astrachan make a group for very early market as well as for home use. Gravenstein and Fameuse are fairly well known, and the latter is not uncommon in our farm orchards; but the noble Gravenstein is very seldom found. As for Fameuse, it is so subject to insect depredation that I will no longer plant it unless in very open lots, where wind and sunshine can have complete sway. In the place of Fameuse one may plant Shiawassie Beauty, which is one of its seedlings. Follow this with Walter Pease and McIntosh, two more of its seedlings, and you will hardly miss the old sort. I should class Walter Pease and McIntosh at the very head of apples for quality—good for both table and cooking. Another seedling of Fameuse is Princess Louise, a most delicious October and November apple; only this also is a favorite of the worms and moths—so much so that I am grafting it out. Autumn Strawberry is another superb fruit beloved of the insects, and therefore suitable only for open lots; but Summer Strawberry or Sherwood's Favorite is excellent in every way. The tree will stand in a close orchard, and serve well as a filler. Walter Pease has an aroma that makes it delicious even to smell. It flavors the whole cellar. In October the President apple is one of the choicest for desert. It is large and yellowish, and for flavor hardly surpassed. It is one of the digestible apples. Pound Sweet is growing in favor again, and one can hardly raise too many for local market; but it should always stand out in the open, and be left on the tree until about the first of October; then it becomes a magnificent fruit, full of sweetness. A green Pound Sweet is most worthless of all apples. Among our winter sorts the Staymans Winesap, the Grimes Golden, the Hubbardston, the Danchy Sweet, the Mother, make a good supplement for Spy, Greening, Baldwin, Spitzenberg, and Swaar. These varieties will constitute almost a perfect home orchard, and at the same time are sorts admirably adapted for market. I should be inclined to add one or two which are hardly first class for home use, but sell wonderfully well; such as Alexander and possibly the York Imperial. Neither of these are good home fruit. Stuarts Golden is a medium-

sized apple, delicious, and a very long keeper. Then we have the old Seeknofurther, if one cares for a rather mild flavored fruit. All of these sorts are fairly free from insect attack, with thorough spraying.

Our worst pest just now in the orchard is the trypteta fly. This insect stings the fruit all summer, and we can scarcely protect it by any of the sprays. If I were to plant an orchard over again it should also be a sheep pasture. In this case every apple that drops is immediately devoured, worms, eggs, and all. It is positively the best way of getting rid of insects. I find that trees growing in berry lots or otherwise among bushes or in vineyards are beset with the trypteta far worse than others. The minute eggs are thrust through the skin all over the apple, and hatch out at any time when there is sufficient heat. The very small worms gut the fruit—sometimes in the middle of the winter, in the cellar. I have been compelled to sort out over half of my Northern Spy as second class, or fit only for cider. Among the varieties least subject to this evil are Hubbardston, Seeknofurther, Pound Sweet, Baldwin, and Spitzenberg. The Swaar also comes out solid and clean. The Fameuse or Snow is so badly infested that sometimes the whole crop goes.

I wish to add a note concerning the Spitzenberg. This magnificent fruit is supposed by many to be run out. The same impression has gone abroad concerning the Swaar. The truth is that both of these apples will grow just as well as ever, and give their glorious fruit in profusion, if treated as they were by our fathers. They must be grafted high on old trees. If root-grafted, they stand on their own trunks, and are subject to winter scald very badly. The result is short-lived trees. The King is another sort that needs high grafting. On its own roots, or root grafted, its limbs sprawl, and it is short lived. This variety is also very subject to insects when growing low. I have not mentioned Jonathan, and only referred to Grimes Golden or Golden Pippin, simply because these varieties are unfit for clay soils. They thrive best in the sandy soils of Southern Ohio and West Virginia, and in some of the Mississippi Valley States. They are both of them woefully subject to the trypteta fly.

I have tried in these notes to give such accurate information, in brief, as will guide country home makers in securing a thoroughly good orchard. Wismers Dessert perhaps ought to be added to my list, on the authority of some of the best growers; while Delicious and Senator are coming to the front wonderfully for quality, and Black Ben and King David for quality and beauty.

There are two chief things to be considered in apple raising; excellence of stock and care in growth. And there is no doubt but of these the very first and more important is excellence of stock. It is never worth while to grow a poor fruit. This is quite as true of other fruits than apples, but it is apples only I am now considering. A poor tree gives no satisfaction, it takes up valuable space, and, when neglected, is a breeding place for all manner of disease. The difficulties that most growers have with fruit trees come from bad stock, and nothing is more discouraging. My object in this article has been to condense some experiences with growing apples and to name some of the best varieties. It is a culture of deep interest and one that will well repay the trouble put upon it.

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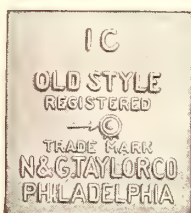
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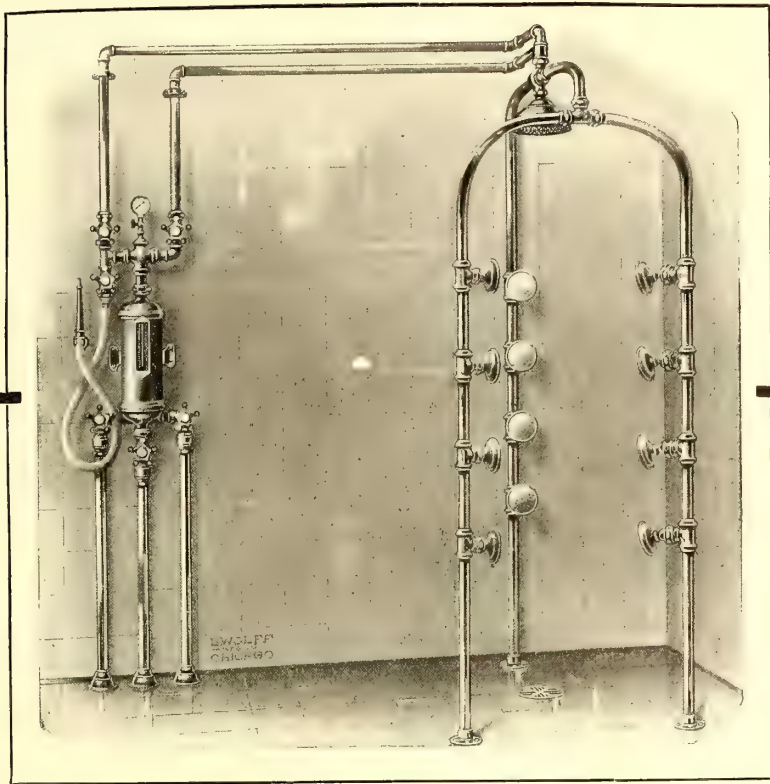
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The cut herewith shows one of a large number of vines in my garden this season. Notice that each stalk is loaded with large, perfect fruit from top to bottom. This is the result of my method.

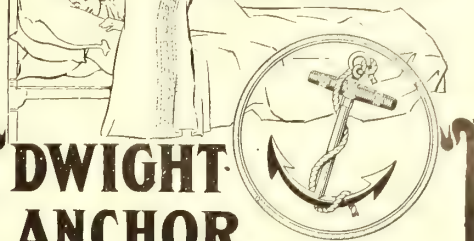
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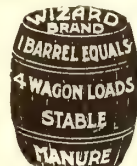
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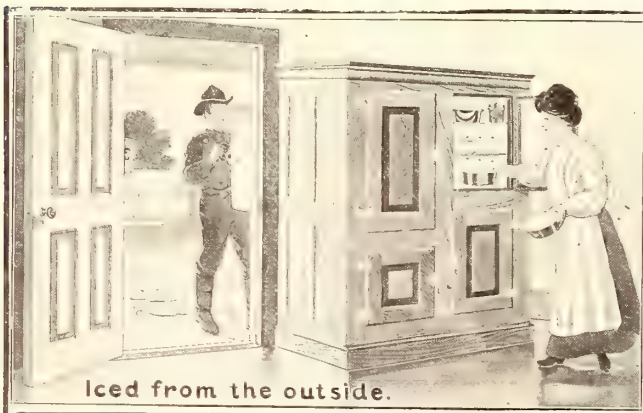
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GARDEN HINTS FOR MARCH

By Eben E. Rexford

HOTBED making will be in order this month. Use fresh manure from the horse stable. Be careful that it does not become wet before put into the bed. Work it over, and remove all straw and hay. Then pile it up on the spot chosen for the hotbed, covering a space somewhat larger than the hotbed itself is to occupy. It is a good plan to spread it out in layers four or five inches thick, treading each one down well before another is added. Round the heap up well, and cover to keep out rain. Leave it until fermentation sets in. Then fork it over, and make another heap of it. It will again ferment. After this second fermentation it will be in proper condition for use in the bed. Spread it out evenly and pack it down well. It should be about two and a half feet deep.

It is now ready for the frame. This should be about eighteen inches high at the back, which should be toward the north. There should be a slope of the sides of the frame toward the south—a drop of from six to eight inches from back to front, or sufficient to bring the sash at the proper angle to receive the full benefit of the sun. Bevel the back and front boards in such a manner that the sash will fit them snugly. If the frame is a large one, it will be well to run a bar across the center of it, from front to back. This will give it necessary rigidity, and the bar will serve as a central support for the sash. If more than two pieces of sash are used, it is advisable to run a bar under the meeting places of each.

Place the frame over the prepared soil. Bank it up well all around with manure, pressed down compactly. Then cover with the sash. This should be allowed to remain in place until a high degree of heat is generated.

When this begins to decrease, and the thermometer registers eighty-five to ninety degrees, cover the manure inside the frame with about six inches of very fine soil.

The bed is now ready for use. Do not sow seed before the middle of March, at the north. Plants from seed sown then will be far enough advanced by the time it is safe to put them in the open ground. Earlier sown ones, which are obliged to remain for a considerable length of time in the hotbed, are pretty sure to become weakened by close confinement.

If one can have two hotbeds, one can be devoted to early vegetables, like radishes, lettuce, and others of similar character. This can be got into working condition by the first of the month, and the second one held in reserve for starting the plants which are to go into the garden when warm weather comes. Under such an arrangement as this I would not advise sowing the seeds of the latter class of plants much before the last of the month. But where one bed must answer for all kinds of plants, some concession must be made to both early and late ones, and we proceed on the principle of "splitting the difference."

A coldframe is almost as important as a hotbed. The two should go together; in fact, the plants started in the hotbed being transplanted to the coldframe, when they have made two or three sets of leaves, there to remain until it is safe to put them into the garden. With proper treatment while in the coldframe, they can be hardened off and prepared for the change to outdoor conditions, thus greatly lessening the chances of failure, which are considerable when plants are put out directly from the hotbed.

The coldframe is simply a frame of boards, similar to that of the hotbed, set over a bed of rich soil, and provided with a covering of sash. This sash should be movable, so that

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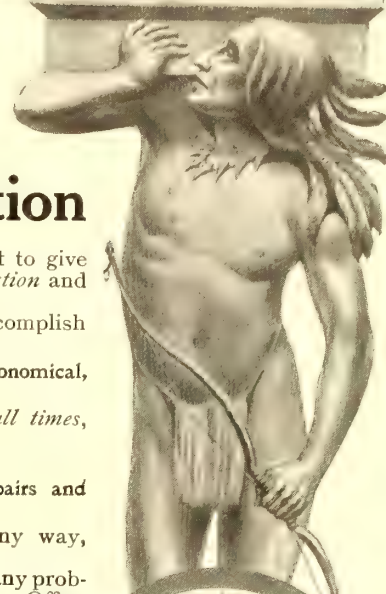
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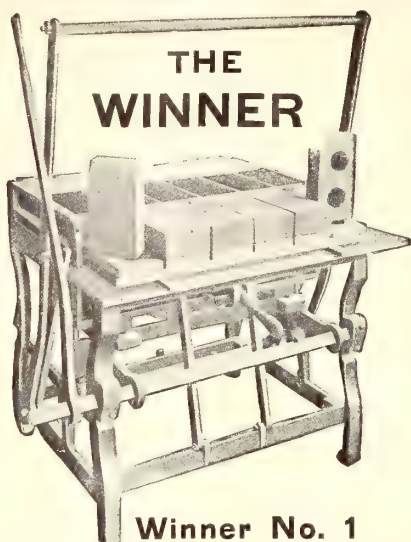
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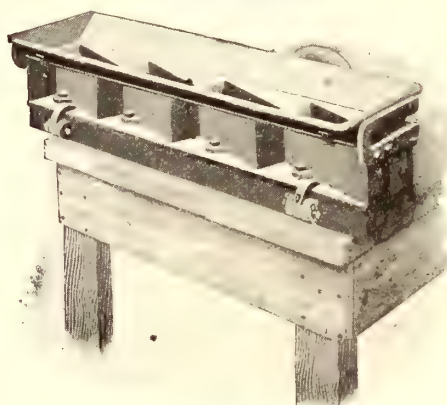


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free ventilation can be given in pleasant weather. The temperature should be kept at sixty or sixty-five degrees, to insure healthy growth of seedlings.

On cold days the sashes of both hotbed and coldframe should be kept nearly closed—quite so, if the air is full of frost. They should be closed each afternoon, in pleasant weather, before the temperature begins to drop. Open on sunny mornings before the heat of the sun, as concentrated on the glass, becomes intense. It will not be necessary, in the ordinary weather of early spring, to open the sashes widely—just enough to allow the moisture of the air inside to pass off and some fresh air to enter.

Ventilation must be given from the start, if one would grow strong, healthy plants. If the hotbed is kept closed all day, seedlings will soon damp off and die. The amateur gardener may be puzzled to know just how much or how little to ventilate, but a little careful observation will soon enable him to manage this part of the work successfully. Avoid opening the sash in such a way that a cold wind can blow in on the delicate plants. They can be tilted on the cross bars in such a manner as to allow the damp air to pass off freely, and prevent the exposure of the plants to cold drafts and frosty winds.

In the hotbed, properly managed, one can grow radishes and lettuce nearly two months earlier than you can get them from garden sowing. Other plants, from later sowings, will gain a month or six weeks on plants started in the garden. It pays to have a hotbed if you care for early vegetables.

If an early supply of rhubarb is wanted, put a barrel, minus head and bottom, over a strong clump of roots, and bank up about it with fresh horse manure. Cover the top of the barrel with a blanket, or something similar, until growth begins. As soon as leaves start, remove this covering, and let the light assist in the development of the plant. Forced rhubarb has a mild acidity and a most delicious flavor, and will be greatly enjoyed during the early spring, when the system seems to "crave something sour."

Prepare the garden for the reception of seed as early in the season as it can be worked satisfactorily. At the north, as a general thing, not much can be done to advantage this month in the way of plowing or spading. We must wait until the water from melting snows and early spring rains has drained out of it. But in warmer latitudes this work can be done now. Throw up the soil, and leave it exposed to the action of the elements until it will crumble readily under the application of the hoe. Then pulverize it, and work into it whatever manure is made use of. You can not make the soil of the garden too fine or mellow.

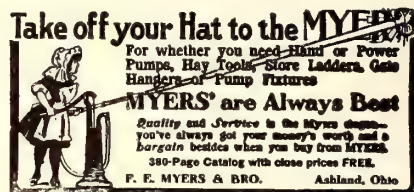
At the north manure can be spread over the garden in advance of plowing or spading, thus anticipating some of the work of the season. Use fertilizers liberally, if you want fine vegetables. Vegetables grown in a soil of only moderate richness are almost always tough and lacking in flavor.

Now is a good time to get racks and trellises ready. Always have one or the other to train tomatoes over. These should never be allowed to lie on the ground, as they always will, after setting a heavy crop of fruit, if not given some kind of support. Some prefer a frame made of lath, in the form a square, supported at the corner by stout stakes. Over this frame the vines are trained, and the fruit, as it hangs below, gets the benefit of a free circulation of air and freedom from moisture. But I prefer a trellis of slats, or coarse wire netting stretched between stout posts, because it allows the fruit greater exposure to the sun. This causes it to ripen somewhat earlier, and gives it a beautiful color.



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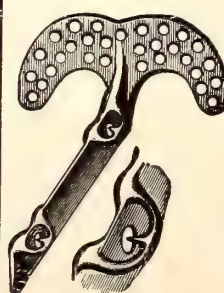
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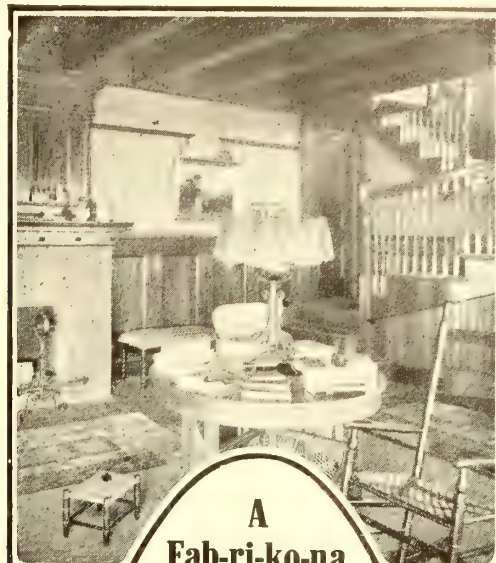
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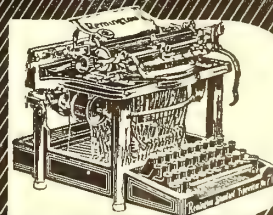
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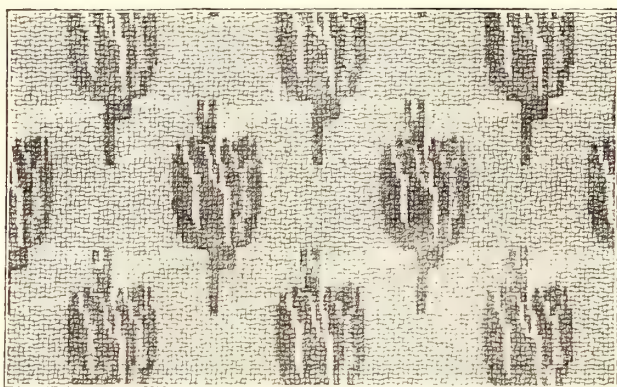
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Peas can be sown very early in the season. In fact, they must be sown early, if you want a good crop from them. Late sown peas are failures as a general thing. Get your seed of this most delicious vegetable into the ground as soon as the latter is in workable condition. Sow thickly and cover well. Be sure to have a good supply of early varieties. For a late crop, there is no variety superior to the good old Champion of England.

Do not uncover raspberries, blackberries, or grapes until the danger of frosty nights is past. If uncovered too early in the season they frequently make a start, and will have got fairly to growing when a "cold spell" comes along and kills the swelling buds. Better leave them where they will remain dormant until all danger of this kind is over.

If you have not ordered garden seeds, do so at once. Get the best seed you can find. It may cost you more than ordinary seed, but the extra cost will be money well invested.

Send in your order for asparagus and rhubarb plants, if any are to be set this spring. If they arrive before you have the ground ready for them, spread them out in the cellar, and keep them damp by covering with moss or old carpeting until you have the ground prepared for them.

Set asparagus two feet apart in the row. Let the rows be at least three feet apart. This will give you a chance to work among them with the garden cultivator during the summer. I would advise two-year-old plants. Set them so that their crowns will be at least four inches below the surface. Have the ground dug up to the depth of two feet and heavily manured. Keep the weeds down, and don't cut the plants any the first season.

Make the soil rich and deep for rhubarb. Set the plants two feet or more apart. Buy strong roots, of the best variety.

Arrange the garden in advance. It is a most excellent plan to make a rough diagram of it on paper. If this is done, you can locate your plants to the best advantage, because your plan will be made while you have leisure to give the matter careful thought. If you have no plan when the season opens, quite likely, in the rush of the work, a good many of your plants will get in the wrong places. Avoid the possibility of this by deciding where they shall be beforehand. Aim to plant the tall-growing sorts at the north side, where they will not shade the low-growing kinds.

Give up the warmest places to such vegetables as you want to make a quick growth.

Arrange for rows, instead of beds. Keep the garden cultivator and its use in mind. Where this can be operated to advantage—as it always can under a system of row-planting—the work of weeding can be so simplified that it need not be dreaded in the least. With a cultivator, a man—or a boy—can do more in an hour—and do it better, too—than he could do in a day with a hoe. It is an easy matter to keep the garden free from weeds where the cultivator is used, and in disposing of the weeds the soil is so stirred that no work with the hoe is needed. You "kill two birds with one stone."

What has been said about uncovering garden small fruits too early applies with equal pertinence to roses and other tender shrubs and to the bulb-beds. Nothing is gained by being in haste to remove winter protection, and quite often all is lost. Wait until you are sure the weather is settled before uncovering them. Then they will come forward rapidly and satisfactorily.

If any changes are to be made in the border, or among the shrubbery, plan for it now. Decide just what you want to do. Never go at any work of this kind in haphazard fashion. Have a definite aim in view, and work toward it steadily. If this is done, the home grounds

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will improve year by year, until you have accomplished your plans, and you will have a place to be proud of. But the planless system, which so many persons follow, never achieves satisfactory results. It gives one the impression of something that started out for somewhere, but never succeeds in getting there.

BEDDING PLANTS FROM SEEDS

By Ida D. Bennett

IT IS to be regretted that the ease with which many of our summer bedding-plants of the foliage varieties may be raised from seed is not more fully understood and appreciated. To many the purchase of any considerable quantities of bedding-plants from the florist, must act as a deterrent quantity in their culture, as it requires no small outlay to purchase sufficient plants of any really desirable variety of cannas, for instance, for bedding purposes, even a small bed costing from five dollars up. Coleus may be indulged in with somewhat less outlay, but even here the cost is so much in excess of that of the seed-raised plants that the claims of the latter are well worth considering.

Cannas are very easily raised from seed and for the past two or three years the florists have made an effort to supply the demand for reliable seed of the more desirable varieties, and excellent seed of the Crozy, and many of the large-flowered, named varieties are to be had at a reasonable price. In buying canna-seed it is well to buy by the ounce, unless seed of several varieties are wanted, when the packages will have to be purchased.

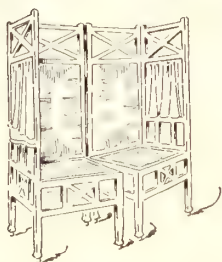
In sowing canna-seed—which should be done in pots in the house early in March for best results, the seeds must first be filed or sandpapered until a bit of the white shows through; they must then be soaked over night in hot water, or until the outer husk has burst and the inner swelled and softened. Treated thus they will germinate in two or three days, while without this preparatory treatment they would remain in the ground as many weeks. Very small pots may be used to start the seeds at first, and two or three seeds may be planted at once and only the best allowed to grow—if seed is plenty, but of course in the case of choice bought seed one will not care to discard any, and one seed may be sown in a pot, or the two or more may be carefully separated when the plants come to be repotted. The care of the potted seed is the same as for all house-sown seed—warmth and moisture and, after the plants are up, light and sunshine; a position on the little "sash-shelf" is excellent for the little pots. When the pots are filled with roots, shift into a size larger and grow on until time to plant out in the open ground when all danger of frost is passed, shifting from time to time as necessary.

Coleus are easily grown from seed and should be sown in flats or the little house-boxes with glass lids. Sow the seeds in drills or broadcast, covering an eighth of an inch deep, and keep warm and moist.

When the leaves touch and the plants are of a size to handle, prick out into other flats, setting an inch or two apart in the rows and grow on until the leaves again touch.

By the time they are ready to go into the ground they will have developed sufficient coloring to make a choice possible, and any poorly marked or off-colored ones may be discarded. It is better in planting to alternate the dark and light varieties, using but two colors, rather than a mixture of many kinds. I have grown beautiful coleus from seed that compared very favorably with the cuttings grown by the florists.

Coleus thrive best in sandy soil in full sunshine, as the heat serves to bring out their rich



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MUNN & CO. Publishers of "SCIENTIFIC AMERICAN" 361 Broadway, New York

coloring; grown in the shade they are apt to "hark back" to the original greenish strain.

Coleus should never be allowed to bloom, but all flower-buds should be removed as soon as they appear. They should also be kept cut back and not allowed to make too robust a growth, for when growing too rankly they are likely to lose their large leaves and to present a more or less ragged appearance.

The ricinus, one of our noblest ornamental plants, is also very quick to respond to culture. The seeds, which take about two weeks to germinate, may be sown in pots in March or April, using a four-inch pot which should have the drainage-hole covered with a bit of shard, or the roots will push straight through to the detriment of the plant. When planted in four-inch pots in April they do not usually need re-potting before planting out in May, but if necessary they can be easily shifted into six-inch pots and should make robust plants by May.

The ricinus when used as a center for a bed of cannas should have the lower branches removed and be grown in an umbrella form, so as to leave more room for the cannas while affording a grateful shade for such tender bloomers as the Burbank and those orchid-flowered varieties which fade in strong sunlight.

The brilliant salvia, so beloved of all lovers of gorgeous color, is another easily raised seedling, and it will be found, as a general thing, that the seed-raised plants are much more robust than the greenhouse plants raised from cuttings. Any plant raised from seed is far more likely, given good conditions, to prove a good bloomer than plants raised from cuttings, as in the case of the seed-grown plant there is no check of intention, the natural bent of the seedling being to sprout, to grow and to bloom, it proceeds to do so in the most direct way; not so the cutting. In the first place the parent plant has been denied its natural function of bearing seed, it has been checked in its growth, mutilated and diverted from the original impulse implanted in it at its birth by nature, and if this has been going on for several generations of plant life, it is not strange if natural selection, in the struggle of existence, produced a non-blooming plant or one in which the desire to breed and reproduce its species is more or less weakened. I have grown salvias from seed that were giants of their kind, I remember one bed, given generous culture, that when I had penetrated to the center of the bed I could just see over their tops, and they were a mass of flowers from near the ground up.

The dahlia is another plant that comes easily from seed and will do better in the hands of the amateur than the plants from roots; especially is this true of the single kinds, which, by the way, are much more effective for cut flowers and corsage wear than the double. Dahlias grown from seed in my own garden this summer were a month or six weeks ahead of the plants from tubers in blooming.

Dahlia-seed may be sown in the boxes in the house or in the hotbeds—preferably the latter. They should be sown in drills, a half or an inch apart in the drills and covered an eighth of an inch. They are ready germinators and make a rapid, sturdy growth from the first, and may be planted out where they are to remain when quite small.

A very ornamental plant for bordering beds of tall growing cannas or to intersperse between caladiums or other foliage plants is found in the globe artichoke—the variety that shows the silvery foliage. A row of this in my garden a couple of summers ago was admired more than many choice bedding-plants, and truly the great silvery, spiked leaves were beautiful. Another of the silvery foliaged plants well worthy cultivation is the Solanum

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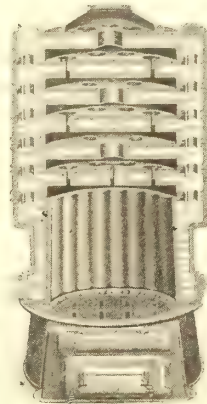
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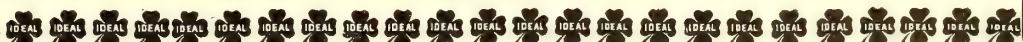


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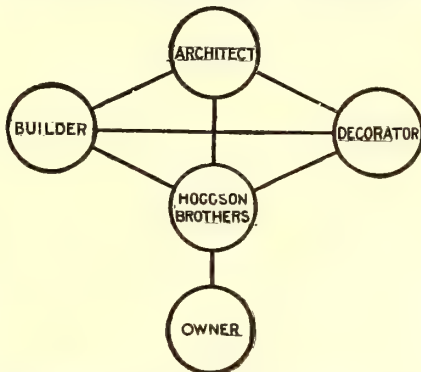
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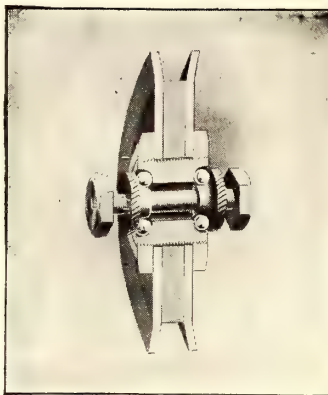
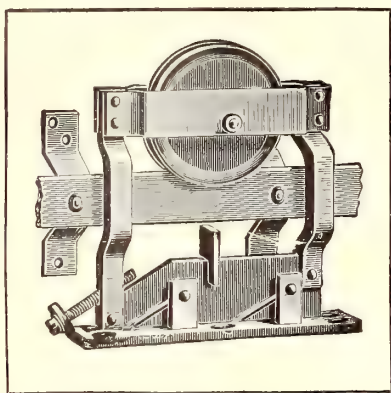
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Marginatum. This grows about three feet high, has large grayish-green leaves bordered with snowy white and the entire stem and underside of the leaves of the plant is of the purest snow white. A beautiful plant in contrast with other dark-foliaged plants either cannas, ricinus or caladiums. It is easily raised from seed started in the house in March. The seed germinates rather slowly and the young plants require some coddling, but once established in the open ground require little care.

THE HARDY LILY BED

By Ida D. Bennett

FROM June till October the lilies blazen and bloom. The stately white Annunciation heads the procession with her up-held chalices of snowy sweetness. Easily first in our affections as she is in the floral calendar of the year—if we except the longiflorums, which are not common enough in our gardens to rival the lily of the Annunciation, and it is not until the sultry days of August that any great activity in the lily kingdom is shown; then, indeed, she must look to her laurels, for now the gorgeous Japs are in evidence. Roseum, rubrum, album, Melpomene, all in robes of white, sprinkled with rubies, gold dust and diamond frost, with that stateliest of all lilies—auratum—standing sentinel over all. These are the lilies most commonly met with in the hardy garden.

Less frequently met with are the Washingtonia, gigantea, and the famous Burbank lily—the fragrance of a bed of which it is said may be detected at a distance of ten miles; these are the aristocrats of the lily kingdom, and yet subservient to the same laws that govern the more humble subjects, and like them obliged to toil—despite the charge—"consider the lilies of the field, they toil not, neither do they spin"—in their laboratory of the earth to transmute its elements into leaf and stem and blossom, and whether the lily in the cultivated garden finds these elements to its liking depends upon the intelligent forethought of the gardener. Growing wild on its native Japanese hillside the lily has a choice of soil and location in a measure. Transplanted to our American gardens it is at the mercy of the one into whose hands it falls and it should be accorded generous treatment.

While any good garden soil properly prepared will grow the lily it would seem wise to approach as near to its natural environment as possible. In its native habitat it is found growing wild on the hillsides where the roots of the trees form a network through the ground and thus insure good drainage. Travelers in Japan say that it is difficult to dislodge these lilies from the encircling roots, so buried are they in them. Then, too, the falling leaves protect the lily both summer and winter, forming a mulch of constantly decaying leaves that protect their roots while the trees afford shade for the plants while in bloom.

This would suggest the shrubbery as a favorable place to grow lilies and the proximity of tall shrubs and small trees on the windward side of the lily bed cannot but be an advantage. They may also be grown among the peonies with good success. Any good garden soil, well enriched with leaf mold and old, well-rotted manure, will grow the lily to perfection; it should be dug deep and well incorporated, and good drainage provided; where there is any reasonable doubt about the drainage it will be wise to dig out the bed to a depth of two feet and fill in a few inches of rough gravel and broken shards, this will prevent the water settling around the bulbs and causing decay.

The lily bulb is very susceptible to decay and disease and precautionary measures are



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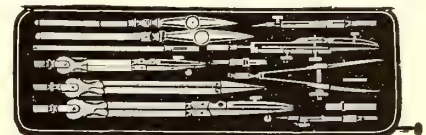
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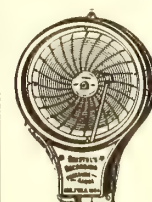
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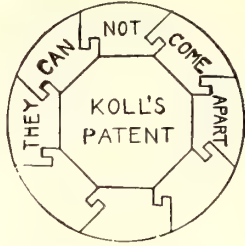
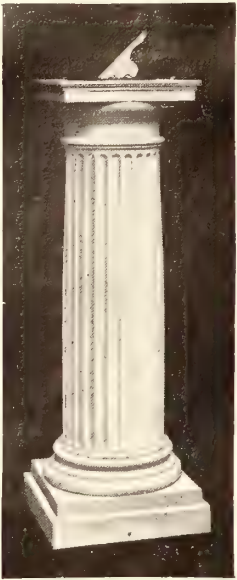
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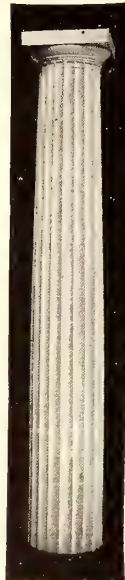


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always in order. As the Japan lilies do not reach this country until late in the fall, it will be well to get all orders in to the florist early that they may be filled from the first consignments of bulbs. Then if the beds are prepared in advance they may be gotten into the ground before severe weather. However, it is possible to make successful planting of bulbs as late as Christmas. I have planted them when it was necessary to break the frozen ground with an axe, but the bulbs did unusually well the following spring.

The Japan lilies should be planted about nine inches deep and it is well to place sand around the bulb sufficiently to prevent the earth coming in contact with it. A little sphagnum moss directly under the bulb is another wise precaution, as this will insure drainage for each particular bulb and prevent the settling of water about the base of the bulb.

After the lilies are all planted and the soil firmed about them the bed should be given a dressing of old, rough manure, leaves and litter; the coarsest of this may be raked off in the spring and the fine manure worked into the ground. This, however, must be done before the lilies start as they are very tender; as soon as the frost is out of the ground is the best time to work over the lily bed; it should not be disturbed after the middle of April or the first of May according to the latitude. The Annunciation lily, which ripens its foliage in August and remains dormant for a short time, should be planted at that season and not be disturbed later. This lily grows its bulbs close to the surface, hence should not be planted deeply. As it lies near the surface of the ground it is easily affected by frost in winter and sun in summer. It should, therefore, have the protection of the vicinity of other plants; lately I have grown them successfully among the peonies. Their earlier start in the spring enables them to get their heads above the foliage of the peonies before those plants have made much growth and the peonies afford protection from the hot sun during the summer.

All lily bulbs are composed of a succession of layers of scales; these are very tender, and in handling the bulbs care should be given that none are broken; when this does occur the broken part should be removed with a sharp knife and no ragged edges left to decay and affect the entire bulb. These broken scales may be planted in sand and will in return produce new bulbs. If one cares to sacrifice a bulb it may be separated into scales and each one planted, base down, in sand and in time will produce a large colony of mature bulbs. Given good soil, drainage and proper planting the lily is fairly healthy and long-lived, but when it becomes apparent that the plant is deteriorating the cause must be looked for. When the season of rest comes and the bulb is dormant, it may be lifted and examined for the cause; this will often be found to be decay caused by improper drainage, some structural injury, or the too close proximity of manure. Whatever the cause the bulb should be thoroughly cleaned and all diseased scales removed. Wherever the base of these scales is sound they may be planted, first removing all unsound or diseased parts. Often it will be found that the ants have taken up their home in the bulb; these must be expelled and the bulb planted in a fresh spot; never put an ailing bulb back in the same place, but give it fresh soil, protect it with clean, sharp sand and place the bit of sphagnum moss at the base.

Do not remove the protecting mulch too early in the spring but displace a portion at a time. If, as sometimes happens, the lilies start too early they should be covered on cold nights and days, otherwise a sudden freeze may take the tender shoots and that will be

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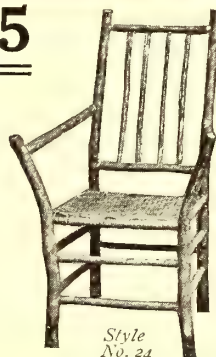
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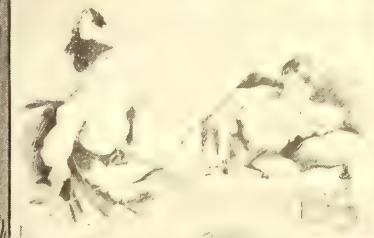
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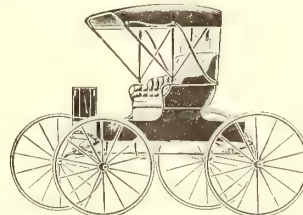
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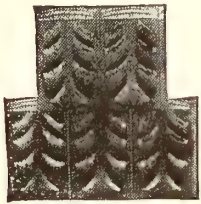
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the end of the lilies for that year, if, indeed, they ever come up again. Last spring my own lilies made an unusually early start—probably owing to the unusually heavy protection they had during winter and the heavy snow, and an unexpected cold wave took nearly all of them, literally cooking them; the same wave also killed all the asparagus above ground—a thing I never knew to happen before.

Never remove the dead stem from a lily by pulling it out, this may cause a fatal injury to the bulb; cut it off close to the ground if it is desired to obliterate it, but it is wiser to allow a portion at least to remain above ground as it serves to mark the exact location of the bulb. Another thing: the stem of the lily always forms a number of small bulblets near the surface of the ground; these, when the stem has ripened may be removed and planted and in two or three years will form blossoming bulbs.

FURNISHING A DARK OR A COLD NORTH ROOM

By Alexander Hooper

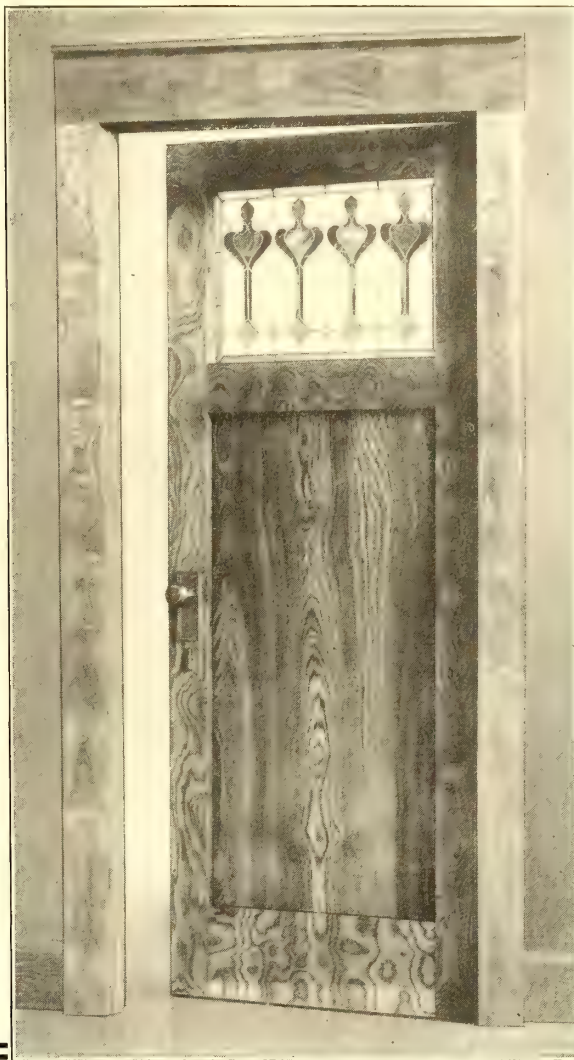
IN MANY houses one finds a room so badly lighted that it always has a gloomy aspect.

By a proper use of color such a room may be made comparatively light and cheerful. The woodwork should be painted white, and the walls covered with ingrain paper of a deep, soft yellow. If the paper is not available, paint or calcimine that color; if paint is used, stipple it. Calcimine the ceiling in a light shade of yellow, and if portieres are used, let them be of a duller shade of yellow. Drape the windows in point d'esprit or bobbinet, and have curtains of some thick, soft material in yellow, to screen the windows at night. They should be hung on brass rods with rings that can be easily drawn. If the room is used for a bedroom have the bedstead of brass or white enamel and all the other furniture of white enamel or light wood. The bedspread should be white, or white and yellow. The floor should be light, and the rugs should have a good deal of yellow in them. The pictures should be light prints or water-colors framed in gold or old ivory. If possible, have one or two good-sized mirrors placed where they will reflect the light.

A cold north room may be treated in any shade of red, or deep, warm yellow. Have the woodwork stained a soft brown or mahogany color, or, if staining is not possible, paint it a mahogany color. Cover the walls with a paper having a cream ground on which are thrown red flowers with their green foliage; poppies, chrysanthemums, roses, etc., are all satisfactory. Select a pattern having long, loose sprays of flowers.

Get crepe, cretonne, or chintz in the same pattern and coloring and make the bedspread, window draperies, and covers for cushions; or the cushion may be covered with denim in the shade of red of the flowers or the green of the foliage. The floor should be stained the same color as the woodwork, and the predominating colors in the rug should be green and red. Use dark woods in the furniture.

This scheme of color could be carried out in a living-room or dining-room having a northern exposure. The paper on the wall should be plain and in a dull Indian or Venetian red. The draperies might be a shade of olive material having much yellow in it; the carpet or rug a deep, dull red, with a mixture of terra cotta, old blue, and olive. The mahogany furniture, if upholstered, should be in dull red or olive; if terra cotta or yellow be chosen, carry out the scheme in the same manner.



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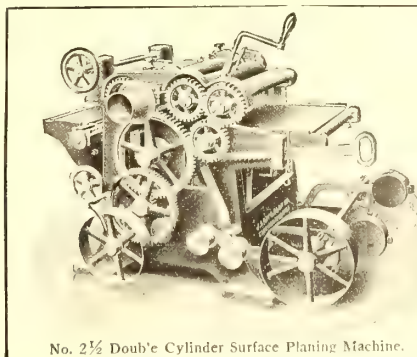
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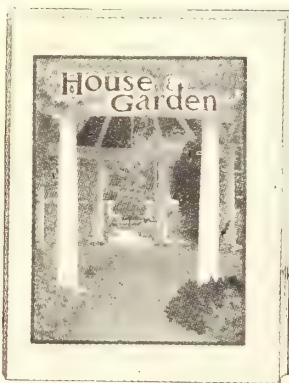
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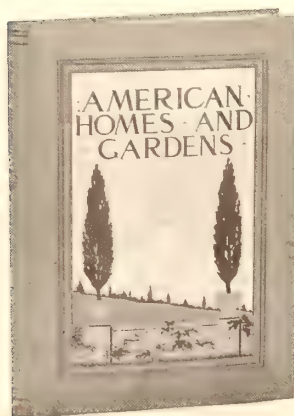
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COLOR SCHEME FOR SMALL HOUSE

By Alexander Hooper

VERY few people when furnishing a small house or flat are aware that old blue is one of the best colors to choose for a foundation. In a house where, as a rule, all the rooms open into one another, especial care must be taken to preserve harmony. It is better, then, to select one color which shall run through all the rooms. Old blue is the color par excellence in such a case, combined with tan, gray, or white for the rugs, while the same scheme prevails in the heavy draperies. A lovely little house has a parlor and library in one. The large rug, covering the greater part of the room, is old blue and gray. In front of the fireplace is a long, light gray fur rug. A broad, low lounge is covered with dark gray. It is always better to cover a lounge in a solid color, as it takes more kindly to the pillows of various hues. The large dining-room rug is old blue and tan, with smaller rugs of tawny brown. The bedroom has an old blue and white rug and white fur smaller ones.

Let old blue predominate everywhere in the floor furnishings and draperies, but not to the exclusion of all other colors elsewhere, for where one color only is used the effect as a whole is flat. Odd, bright color touches in the way of pillows, odd bits of china and bric-a-brac, but always with an eye to what is the proper color for each room. Be careful to see that all the rooms blend into a beautiful harmony.

In a bedroom white enameled or bird's-eye maple is exquisite where two or three pieces of fresh old mahogany are added. Each heightens the other's beauty in a most charming manner. A room furnished entirely in mahogany has a heavy, dismal effect, but in a parlor and library combined, say in a flat or small house, place a large, quaintly carved old desk, and one of those highly polished round card tables, and see what an air they give to the modern and equally beautiful furniture.

In the dining-room a square mahogany table with a surface like glass, and even a small buffet or china cabinet will be quite enough of the antique to set off everything else in the room. Have exquisitely drawn linen doilies, cardles in rose-colored shades, and a profusion of say pink carnations, and you have a lovely lunch table.

In a house the hall should be a leading feature—enticing—not cold, bare, and cheerless, repelling one from further acquaintance with the house or its mistress. Old blue is a good friend of a slim purse, as well as the most artistic color to work upon. Dull, soft greens are equally pleasing to the eye until they fade or grow dingy from use. But old blue remains true blue to the end of the chapter.

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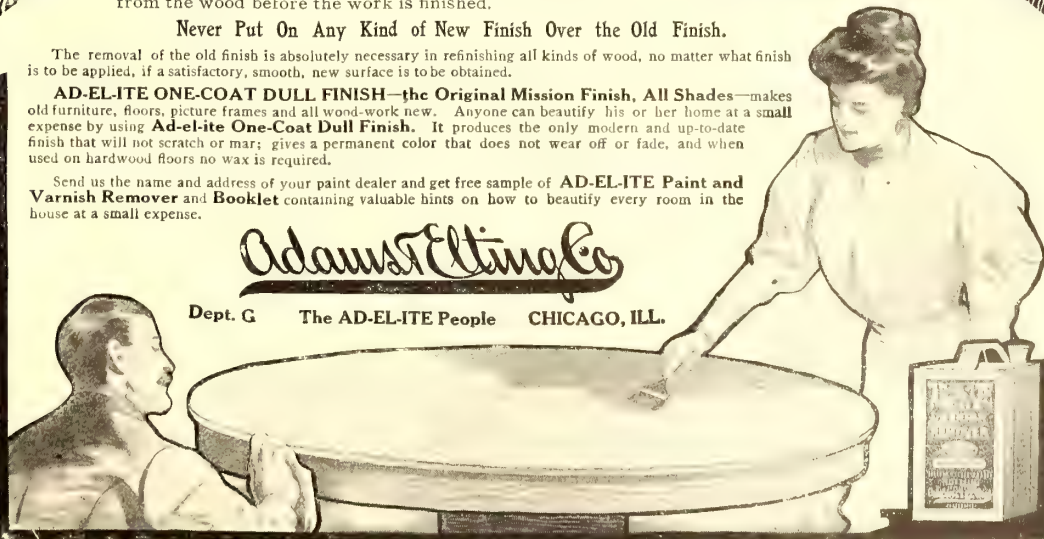
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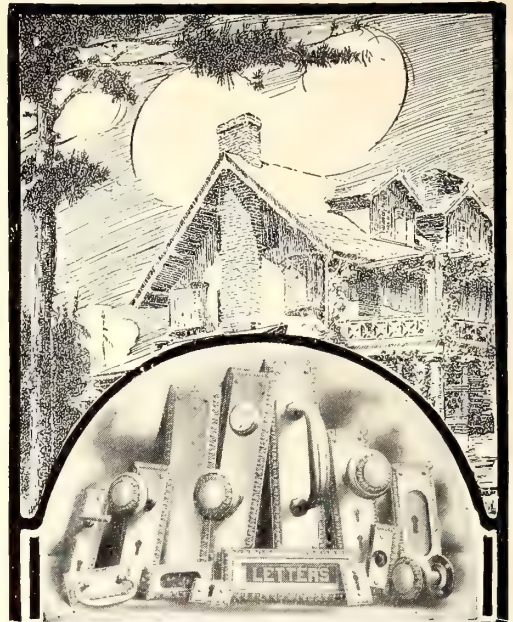
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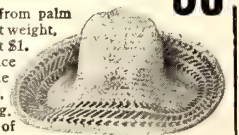
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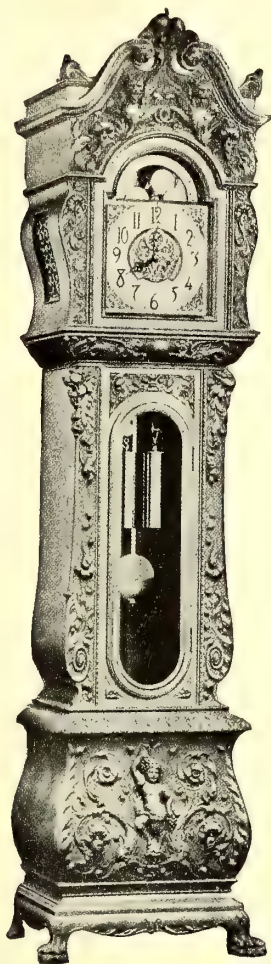
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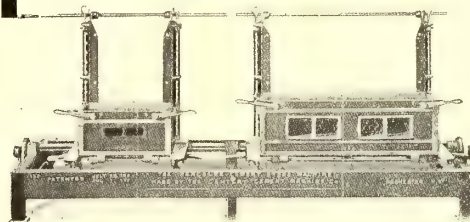
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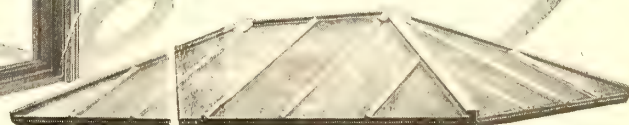
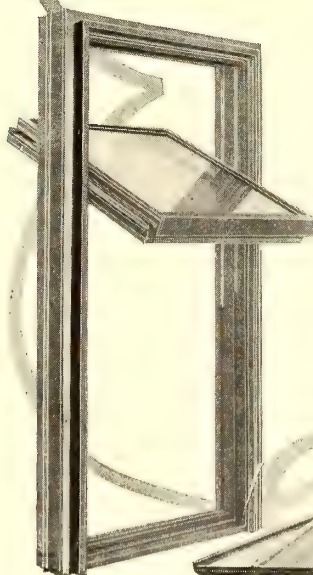
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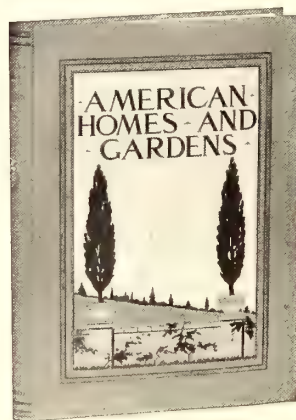
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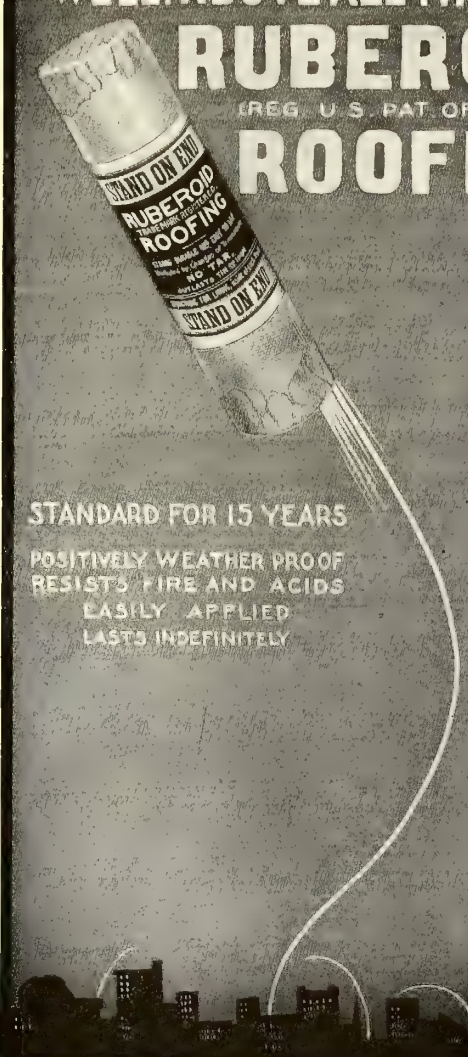
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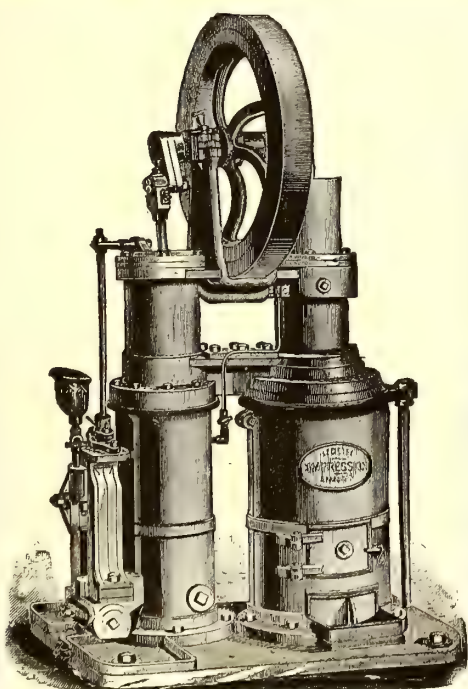
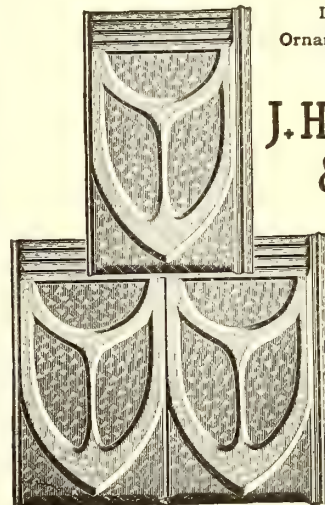
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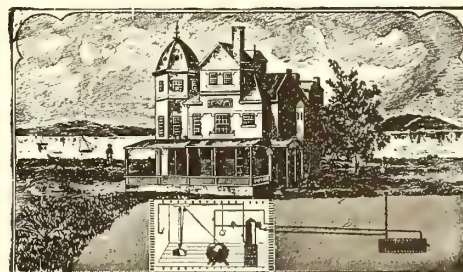
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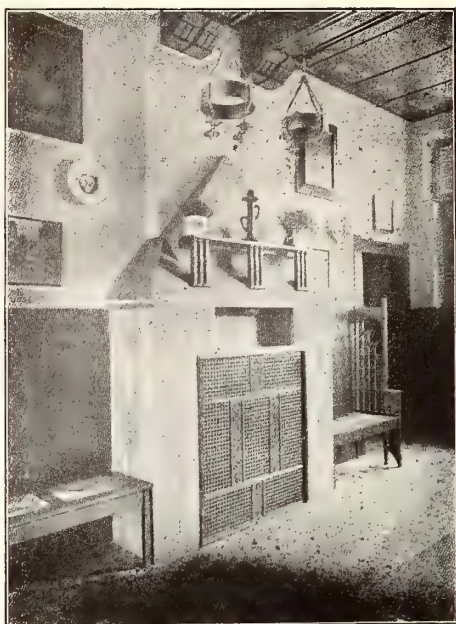
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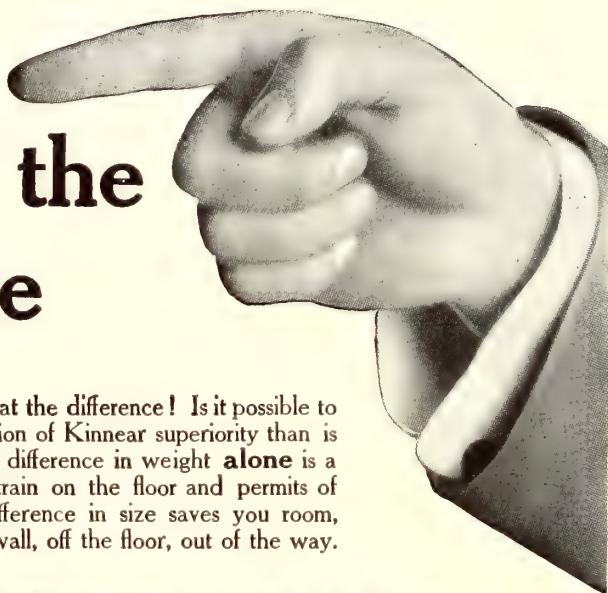
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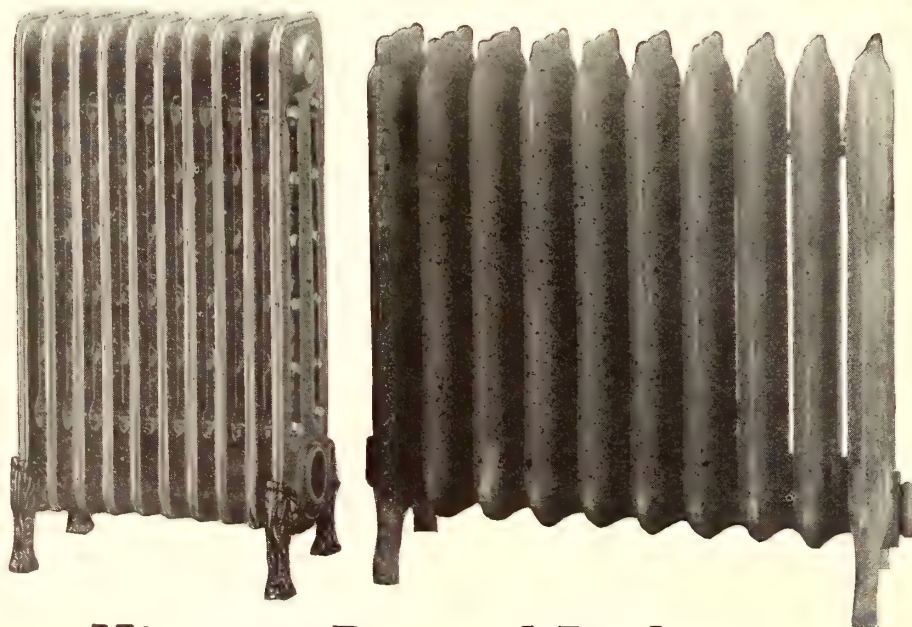
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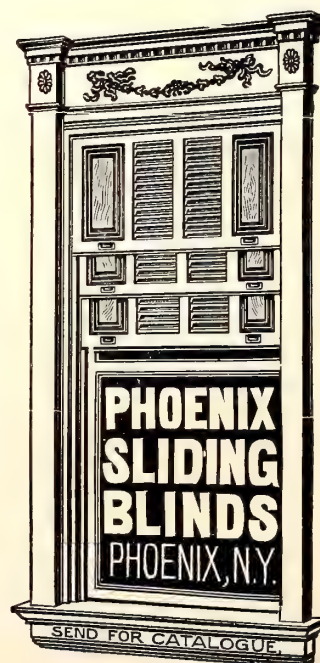
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Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

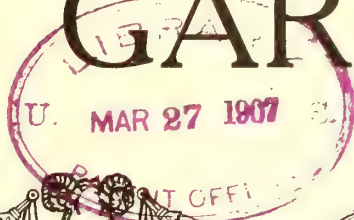
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The Pergola Has Genuine Italian Columns, Erected in the Old Italian Manner with Antique Capitals from Many Sources

AMERICAN HOMES AND GARDENS



Volume IV

April, 1907

Number 4



The Veranda and Its Classic Decorations

Monthly Comment



APRIL is the very busiest month in the year. To those living in the country it is a period of continuous effort, put forth at all hours of the day, and only ceasing at night through sheer lack of ability to proceed without rest. It is tiresome, of course, as all labor is, and exhausting as well; but the results of good effort, well applied, will in the end yield ample compensation. For on what is done now will depend, in large measure, the amount of personal enjoyment one is to derive from one's country house. Whether one grows vegetables, flowers, or fruits, this is the time of all times when plans must be realized and the necessary preliminary labor expended that results be assured. And it pays, and pays well. Not financially, of course, for unless one makes a business of living in the country one must be prepared for all sorts of expenses for the pleasure of doing so. But it will pay in satisfaction and in enjoyment; and that, in some respects, is the greatest of all compensation.

BUT the labors of April are not confined to those put forth by man. It is the awakening month of nature, stirring from her profound sleep during the cold months of winter. The grass is never so fresh and green as when it takes on its first growth of spring and envelops the hills and fields with their first coating of verdure. The flowers seem never so lovely as when the earliest of the season's blooms first open their gentle cups of beauty. Gorgeous as the countryside is in the late fall, its then splendid beauty seems almost coarse compared with the soft greens of spring. And later will come the blossoming of the trees and their leafing, and all nature is clothed with its great new garment, never so lovely as when fresh and new, unsoiled with the summer's heat. There are a thousand things to watch and love in this joyous season, thousands and thousands, the very smallest with a rare beauty of its own; and all yours, for your own delighting, if you will but look, and gaze and understand.

NO ONE should move into the country, even for a temporary sojourn, without being alive to its beauties, and, to speak somewhat pedantically, aware of its advantages as a place of residence. One must love the country, or be prepared to love it, or one had better remain away from it. It is quite true that it is possible to have space and air in suburban and rural districts which are never to be found in the built-up portion of a city; but to move out into the country, especially as a place of permanent residence, with such ideas as the sole motives, is tolerably certain to end disastrously. One must have a real affection for hills and fields and trees and woods, for flowers and farms, for live stock, perhaps, for the quiet of country living by all means. It will be vastly dull otherwise. If the banging of the trolley gong is essential to your repose at night, never for a moment imagine you can sleep in the perfect stillness of the country, where no noise sounds louder at night than the hum of the insect, unless it be the hooting of an owl or the ceaseless song of the whip-poorwill. Don't try it at all unless you like it; don't try it unless you think you are going to like it; and, better still, don't try it if you think you are going to like it without a preliminary temporary sojourn. In a general way it is the easiest thing in the world to buy country real estate; it is sometimes somewhat difficult to sell it, especially if you are in a hurry to do so.

IN endeavoring to get the best for one's money in building a house, attention is chiefly directed to the matter of cost.

That, of course, is so important a subject that it can never be lost sight of, but it is often a quite mistaken idea to regard it as the one essential thing in house building. A successful building operation is one in which a due economy is exercised at every stage. There should be no waste, either of materials or of funds; there should be no waste by the use of poor materials or improper construction. The builder or owner, as the case may be, is entitled to full value for his money. There are, however, other considerations which enter into the building of a house, or which should do so, considerations quite as important as getting good material and good workmanship. And these may be summed up in the phrase, questions of art or questions of beauty. The person who spends five thousand dollars for his house, or ten times as much or more, is entitled to an artistic return, quite as much as a material return. His house must not only be well built, but be good to look at, or it will be as great a failure as a house as any structure can be.

THIS is no new doctrine, but it is one that, even in this day of architectural progress and interest, is by no means understood or appreciated. One has but to look at the multitude of dwellings even now in progress of erection to realize how many houses are being built without due regard to esthetic questions. There is nothing easier than to injure an exquisite landscape by a commonplace dwelling, and the thing is so easy that it is being done everywhere, to-day, to-morrow, and perhaps for many, many days to come. The reason for this state of things is, of course, very clear; people do not care; they do not know; they do not understand. And, of course, it is easy to ask: Why should one spend money for a mere matter of looks when one neither cares nor understands? There is no answer save to regret that, to such persons, is given the ability to build houses.

BEAUTY in houses, as in all kinds of buildings, is not something to be purchased by the cubic yard or by the foot; it is not something added on to a house after the structural parts have been finished with, but is itself a part of the structure. In other words the beauty of a house begins with the ground plan; it is added in the materials; it is increased in the shapes and forms; it is finally achieved in the completed structure. It is not given to every one to accomplish beautiful results even with painstaking care and effort. Because one is an architect and has been trained in all the details of his profession does not make him a beautiful designer nor even a judge of beauty of any kind. The trained man is more likely to accomplish a beautiful result than the untrained; the architect will be more apt to design a beautiful house than the builder or carpenter whom one calls in because he is so cheap; but the mere employment of an architect will not ensure a beautiful house; else why are so many commonplace houses built by architects?

NEVER build a house unless it is well built. Never build a house unless it is suited to the needs of its owner and is sanitary and healthful in every respect. Never build a house with poor materials and in a poor way. And never build a house unless it is a good looking one, possessed of real beauty, if possible, but at least handsome enough to escape being embarrassing to the trees and grasses that surround it. Not all of these rules are followed in designing modern houses, but this would be a more beautiful world—and a better one—were they regarded, as they should be, as universally essential.

Notable American Homes

By Barr Ferree

"North Farm," the Estate of Howard L. Clark, Esq., Warren, Rhode Island



IN CREATING his estate near Providence, Mr. Howard L. Clark was fortunate enough to obtain, at the outset, a half of the former estate of the late Dr. George R. Hall, a physician who practised medicine in China and Japan for some years, and who was the first American to send Japanese plants to the United States in considerable quantities. He here first planted numerous Japanese trees and shrubs, many of which have since grown to superb maturity. The estate is, indeed, not one of exotic trees, but it contains a number of unusual specimens, and Dr. Hall's interest in trees led him to plant many native ones as well. Mr. Clark, therefore, came immediately into possession of much beautiful tree-growth which has given his place unusual charm and interest. His first purchase of a half of the Hall property was followed by the purchase of a half of the adjoining farm, so that, all told, his estate now includes ninety acres.

The outer boundary is a stone wall, man-high, in no way different from other walls of the neighborhood, save for its greater height and more symmetrical alignment. Without it, to the left of the simple road opening, is a thickly planted row of trees; inside a row of maples, more thickly planted, never thinned, in truth, from their first ingrounding. The present entrance to the grounds is new, and through a brief recessing of the outer wall.

Within, on each side of the driveway, are evergreens somewhat widely spaced in grass. To the left is a hedge, with a fine old orchard, and beyond are thickets of trees. To the right is a stone wall inclosing broad open fields. The orchard presently gives way to a forest of young trees, planted by Mr. Clark, which in time will form a dense wood some distance before the house. A turn in the drive brings the house into full view.

The curiosity which has been whetted by the long entrance-way immediately gives place to delight on reaching this quiet and refined structure. It is a simple rectangular building, with a slightly projected pedimented center. On the left, as

one faces it, is a loggia; on the right, an arcaded structure that presently discloses itself as the kitchen and service wing. The house is built of Harvard brick, with trimmings of white marble and wood. There is a small entrance porch, supported on Roman Doric columns standing on pedestals and surmounted with a balustrade. Than this there is scarcely an ornamental feature on the entrance front, the other detail—the window frames, the string course between the first and second floors, the simple cornice, and the leaders—being wholly structural and functional in purpose. The opposite front, which overlooks the upper waters of Narragansett Bay, is quite different in design, the windows being arranged

in bays, and the frames decorated with small columns. Here, in the center, is a recessed porch, decorated in the Pompeiian style, with a floor of cement tiles and painted and decorated walls. The loggia and the service wing are also quite distinctive in their external treatment; but the whole of the exterior is entirely harmonious, and the various parts, notwithstanding their separated uses and treatments, have been welded together in an eminently delightful manner.

The house has no inclosed vestibule, but one enters immediately into a small space, beyond which are steps to the main hall. The whole space constitutes, in fact, a single hall, with two wood columns at the steps to the upper part, with the stairs to the second floor rising to the right and carried across the



A Marble Hermes Stands in a Clump of Retinospora

entrance door. The woodwork here, and throughout the house, is of a most delightful color and texture, being white-wood specially treated with a water walnut stain and wax, a device of the architect of the house, Mr. Charles A. Platt, of New York. The hall has a high plain wainscot of this wood, with a frieze of yellow and buff. The ceiling is of white plaster, and there are Oriental rugs on the hardwood floor. In the center is a round table from Bologna, of a type characteristic of that city. Immediately in face, as one enters, is a glazed door which opens onto the Pompeiian porch on the opposite side of the house. It has olive and drab velvet curtains; on each side is a small square window with thin



The Entrance Front Has a Slightly Pedimented Center, with a Porch Supported by Roman Doric Columns

red curtains. The wall on the stairs is paneled in small squares, and the upper hall is walled in yellow.

On the left of the hall is the library, which occupies the whole of this end of the house and has windows on three sides. It has a paneled wood wainscot identical with that of the hall, as is all the woodwork on this floor. The upper walls are covered with old Italian red and gold damask, dating, probably, from the sixteenth century. There are numerous Oriental rugs on the hardwood floor, and the ceiling is in plain white. The wood mantel has brick facings, and above it is an old carved picture frame containing an Annunciation undoubtedly of the period of Perugino. The fireplace has brass andirons, and before it is a vast red velvet davenport of astonishing comfortness. The windows on each side of the fireplace look onto the loggia, which overlooks the formal garden. The window curtains are of dull red velvet. The room is almost entirely surrounded with low bookcases, and the furnishings include a quantity of valuable and interesting bric-a-brac.

The dining-room is on the right of the hall and in the opposite side of the house. It has a paneled wood wainscot and

cornice, with a broad band or frieze of green silk. The ceiling is of rough white plaster. The fireplace is faced and lined with red brick. The mahogany chairs are covered with tapestry. The most interesting piece of furniture in the room is unquestionably the sideboard, made from the panels of two carved Brittany beds, obtained by Mr. Clark abroad. The panels inclosing the lower part were taken from one bed, while the woodwork of the upper came from another. Both beds belong to somewhat different periods in date, the difference in time having been estimated by some experts as to be as much as a hundred years. As now utilized, however, they constitute an harmonious and beautiful article of furniture.

The morning-room opens from the dining-room. The woodwork throughout is painted white. It is a small apartment with a wood wainscot and upper walls of yellow silk. One side is wholly paneled and shelved, forming a built-in desk. The window has striped curtains, and the coverings of the furniture are, for the most part, white, pink, and yellow.

In a place as large as "North Farm" it would be strange were there not several ways of getting to its various parts. The flower garden may be entered through a window in the library, but it may be more convenient to enter it through the little wooden gate let into the brick wall which

bounds its outer face, and which adjoins the entrance front of the house.

It is a garden of goodly size, laid out and adorned with rare taste. To the left, as one enters by the gate, is a brick wall, before which is a pergola extending to the full depth of the garden. The innermost supports are brick piers, but the outermost, toward the garden, are marble columns, brought from Verona and Venice; old columns with old capitals, that neither fit nor belong to the columns they surmount, but which, in the good old Italian style, are used as pieces of ornamental carving.

Exactly in the center of the garden is a delicious little fountain, rising from a circular pool. And then the whole of the remaining space is marked off in flower beds in formal pattern, edged with low borders of box, and filled, almost to bursting, with flowers and plants, so arranged and grouped as to give constant successions of bloom and constant harmony of flowers. On the far side, opposite the loggia, the distant ground rises naturally, with lofty trees, and a final bounding wall, emphasized in the center by a couple of columns and a heightening of the inclosed wall. On the remaining side the

garden adjoins the terrace on the bay side of the house. This is a spacious grassed space, reaching full across the house, extending beyond its limits on either end. It is inclosed within a low stone wall. Below it are fields, and then clumps of trees, while in the lower distance are the waters of Narragansett Bay, with Warwick Neck, Rocky Point, and other well-known landmarks in the far distance across its shining surface. Very restful it is to sit on the Pompeian porch and cool oneself in the breezes that almost constantly sweep up from below; and very beautiful it is to sit beneath the loggia in the garden, and look out from beneath its nine arches onto the floral loveliness at one's feet. Yet all this loveliness does not exhaust the beauties of this delightful estate.

Nothing finer, for example, can be imagined than the Mall which stretches away like a vast green carpet just beyond the main doorway of the house. How large it is I have no idea, but of size it has abundance, green with the greenest grass, bordered on three sides, to the right and left and in the far distance, with a lofty hedge: privet without, spiræa in the middle, and barberries for the lowest inner rank. All planted thickly and all growing with a marvelous lustiness; the spirea, in spring time, presenting a garland of the purest white all around the great space. At the far end, on each side of the opening left in the hedge, are two old Italian groups, defaced and weatherworn, it is true, but exactly the right thing in the right place.

Just outside the hedge, and extending from the pergola, is a long path which leads to the study, a separate simple little house, built at some distance from the residence. Severe to a degree, it is thoroughly charming. It is all in white, save the door, which is green, with a pedimented centerpiece, with green trellises against its walls for the upholding of roses and other vines. Two vast amphoræ on either side of the door are welcome color notes. A hermes, embedded in a fine clump of retinospora, can be seen in the grass not far away.

Here one leaves the formal treatment of the grounds and plunges into the wilder parts, much of which, no doubt, will in time be more deliberately developed than at present, but which in their present semi-wild state are filled with beauty and interest. One wanders here beneath rare and beautiful trees, many of quite unexampled growth. Here is a remarkable Japanese elm, planted by Dr. Hall, the *Zelkova keaki*, a tree of great rarity and the very finest specimen of its

kind in America, and one of the most noteworthy trees of the continent. Here also is an immense Japanese yew, rising like an inverted pyramid from the ground. Here, among other notable examples, is a cucumber tree, a Japanese magnolia, a Hop hornbeam, the latter a native tree, with long lines of maples and evergreens, a veritable arboretum without the formal growing one rather instinctively associates with notable tree culture. Many of these are true giants of their kind, so that in tree beauty alone "North Farm" is a treasure-place almost without peer among the notable estates of America.

And then there are fields, broad old fields, with their old stone walls. It is true these seem to cut up the estate more than it really is, to limit its apparent dimensions somewhat, but not essentially; since the New England soil must be cleared of stones before even grass will grow upon it, and if not bestowed upon fences where else shall the fortunate landowner put them? Mr. Platt has planned for Mr. Clark a very elaborate planting and development scheme for the entire estate; but its area is so ample, that all that may be done



From the Loggia One Looks Over the Formal Garden with Its Central Fountain and Formally Designed Flower Beds



The Woodwork of the Hall and of All the First Story Is of Whitewood, Stained and Waxed by a Special Process



The Library Occupies the Whole of One Wing; the Walls Are Hung with Old Italian Brocade



One Side of the Morning-room Is Shelled in White and Crowded with Interesting Bric-a-brac



A Sideboard Made from Two Old Brittany Beds Is the Most Interesting Piece of Furniture in the Dining-room



The Recessed Porch Overlooking the Water is Painted
In Pompeiian Style



The Study Is a Classic Structure in White with a Green Door, Green
Trellis and Green Window Shutters on the Outside

in the future has not yet been attempted, while the present natural condition is one of real beauty and deepest interest. Almost everywhere are special developments, special groups of trees, vistas of various kinds leading to definite points or ending in some object of interest. But whatever has been done has been well done. No former beauty has been marred that some new beauty be created; no point of interest changed that something else be substituted for it. Everything that is good and fine has been left as it was and will be left, the changes looking only for the betterment and the enhancing of the natural beauties of this fine old place.

Words are but poor vehicles with which to describe this lovely place; nor are photographs much better. The latter do, indeed, give true impression of particular objects, of the house and its rooms, of groups of trees and glimpses of natural beauty; but to appreciate its loveliness as a whole the place must be seen, for only in this way can the whole of it be appreciated as it should. This is no estate whose salient features are to be comprehended within a single sweep of the eye, much as the merest glance may tell; but it is a property to be lost in—and it is almost large enough for that.



The Entrance Front Faces a Spacious Mall, Stretching Far Away from It, Enclosed with Hedges on Three Sides

A Model House Costing Thirty-seven Hundred Dollars

By Burr Bartram



HERE is a model house at Bryn Mawr Park, N. Y., that has recently been completed for Willis Whittelsey, Esq., which embodies all the requirements of a modern house of simple lines and features.

The site chosen for it is quite unique for the reason that it is well hidden by an orchard on one side and by a woods on the other, forming a very delightful setting and creating that peaceful environment which is so much enjoyed by those who are seeking quiet and rest. This was what Mr. Whittelsey desired, a place within easy access to the city for business and sufficiently apart from it to give that country life which is so necessary for the comfort and health of the business man. The paramount thought in his mind was to have a home simple in its appointments, and yet containing all the modern conveniences to make the house comfortable and complete.

The first thing considered was the plan, which was to provide for a large living-room and dining-room, with the kitchen and its dependencies placed in an annex, and a second story containing

after type of the New England farmhouse. The plans specified the use of only such materials as were absolutely required for strength, durability, and attractiveness.

The ground upon which the house is built is a rocky one, consequently there is a cellar only under the kitchen end of the house. A stone foundation surrounds the cellar, and extends around the remainder of the house as an underpinning. The structure, above, is of frame, with the exterior covered with shingles left to weather finish, while the trimmings are painted white. The roof is covered with similar

shingles. An attractive feature is the piazza, which extends along the front and is one step from the grade.

From the outside the house does not look large, but upon entering one is immediately ushered into the large living-room, which connects with the dining-room by broad double archways, placed on either side of the chimney-breast and fireplace. These two rooms occupy the main part of the first floor, and are trimmed with cypress, stained a soft brown and waxed. The walls have two coats of brown mortar, finishing in the brown coat and tinted.

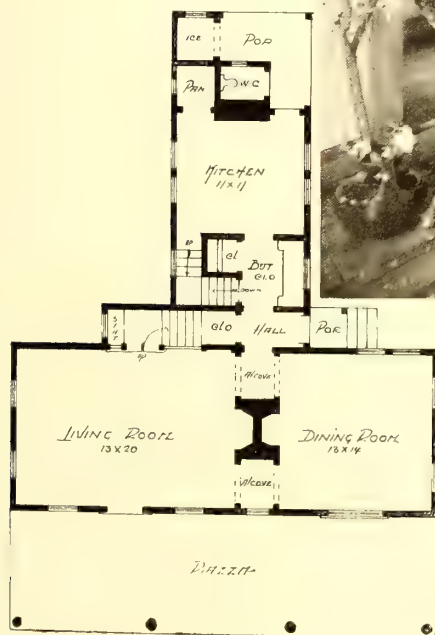
The living-room contains a boxed-in



The House Is Charming to Look at, Thoroughly Comfortable to Live in, and Was Built for the Very Modest Sum as Stated Above



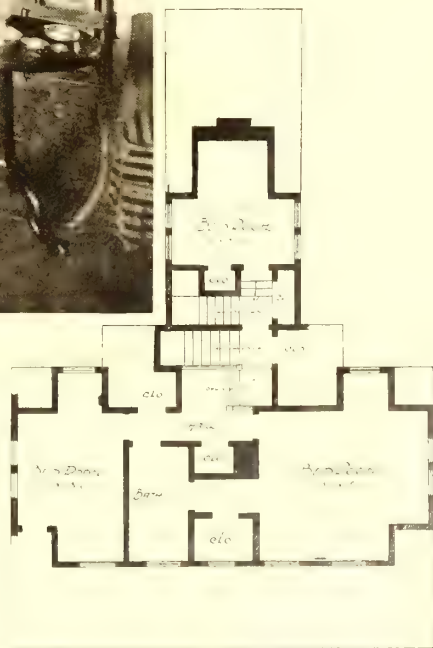
The Cypress Trim of the Living-room Is Simply Waxed and Finished in Its Natural Color



FIRST FLOOR

the various bedrooms and bath; this being satisfactorily arranged, the elevations were considered and made to conform to the plans so far as possible

staircase, which is built in an addition thrown out from it, and is separated by columns rising to the ceiling. At one side of the staircase is a paneled seat.



SECOND FLOOR

The fireplace is built of Tiffany brick with the facings and hearth of similar brick, and a mantel-shelf supported on corbelled brackets. The dining-room has a similar fireplace and also has French windows opening on to a piazza.

The kitchen and its dependencies are trimmed with cypress and finished natural with hard oil. The kitchen and pantries are well lighted and ventilated and are fitted up complete.

The trim of the second floor is painted white, and the walls

are hard finished and covered with artistic wall paper, each room being carried out in one particular color scheme. This floor contains three large bedrooms, ample closets, and bathroom; the latter being fitted up with porcelain fixtures and exposed plumbing. The floors of the first story are of maple, and of the second story of North Carolina pine. The house is supplied with steam heat. It was designed by Mr. Sullivan W. Jones, architect, of New York.

Evolution of American Grounds



EW ENGLAND repeated the home land across the water, not only in the things that she planted, but in the method of planting. The apple and pear and plum and cherry were promptly brought over, and with them shrubs and plants, not only for the small fruit garden, but for ornamenting the lawn.

The garden must be spaded once a year, just as in Old England, although the space to be gone over was much larger. I never saw a plow put into a garden until after 1840. This sort of work bent the backs of our fathers, while the boys, who did the sowing and the weeding by hand, hated the word "garden." If our grandmothers of 1800 could have their way, they created an offset near the house, wide enough for sweet-williams, grass pinks, marigolds, and a few more old-fashioned perennials and annuals. These were almost always bordered with grass pinks. A rosebush always stood at the corner of the house, and a mass of "hundred-leaved" roses stood near the gateway. Climbing over the bedroom window was pretty sure to be found a fumitory vine, delicate and beautiful; and not far away a big clump of cinnamon roses.

There were daffodils and tulips and red peonies in the American garden as far back as 1800, and to these were added white peonies and white lilacs before 1820. I refer of course to their general distribution. In boxes stood often a crimson rose—generally the Sanguinea; and it was not uncommon in the thirties to find boxes of hydrangea hortensis. At this time the most common shrubs included the snowball—*viburnum sterilis*—and one variety of the mock orange. The double-flowering almond is quite as old as this, in dooryards. There were two or three varieties of spirea, and occasionally to be found *viburnum opulus*. The trumpet honeysuckle, and what was then called the sweet-scented honeysuckle, were carefully trained about a framework in the front yard. So few were these treasures that our mothers became quite skilful in propagating them by layers.

A little later great lines of shrubbery, running from the front door and flanking a straight walk to the front gate, came out of New England, and marched westward with the pioneers. When I went into Michigan and Wisconsin in the 60's, I saw it still moving westward, and the pride of pioneer homes. There are still sorry samples of it in the Eastern States, as well as the Western; although the labor of keeping out the grass and weeds from these narrow strips made their popularity brief. The Persian lilacs, with *Josikia*, came into our grounds generally about the middle of the nineteenth century. *Callosa* was added to the spireas, and altheas became the pride of choice grounds. Tartarian honeysuckles came a little later, and with them the *deutsias*. Primroses nestled at the foot of the large shrubs, and it was not uncommon to find a bed of the hardy carnations. These were called spice pinks, and are unsurpassed for country grounds even at the present day.

Cherries and Damson plums were for a long time planted along the fences of the home grounds—a very good plan yet,

for they make a thick and good windbreak. But when the Green Gage and Magnum Bonum became more common they were allowed places near the house. Red currants, with gooseberries, gradually escaped the long line through the grass plots, where they struggled for existence, and became the foundation of the small fruit garden. This occurred about 1850, although there were a few small fruit gardens at an earlier date—gardens including the quince and grape as well as the raspberry, and very rarely the strawberry. About 1850 began to develop a taste for our native shrubs. Barberries, dogwoods, the hazel, and many other beautiful things were gathered about the houses. Now began the division of the grounds into small fruit garden, shrubbery, flower garden, and orchard. The gardens and orchards were henceforth to be worked by horse power.

The opening of Spring was always noted in the early days by two things; our mothers opened their seed drawers, and our fathers took from the storeroom their spiles—made of elder sticks with the pith pushed out. It was time for starting seeds in boxes, and for tapping the maple trees. Hotbeds were uncommon. Our mothers always swapped seeds, very generously. They had by 1850 a good supply of sweet peas, nasturtiums, and some of the newer varieties of pinks. The gladiolus was a simple affair, purple and inconspicuous. Its improvement did not begin until about 1860. Phloxes by this time had grown very popular, but until 1870 were of two colors only, and no way comparable to our modern varieties. By 1850 the list of China roses had considerably increased, and the hybrid perpetuals included Giant of Battles, John Hopper, and others that are still the honor of our gardens. The perennial larkspurs, notably that called the "bee" larkspur, were rapidly disseminated about this time.

The front yard had been made by running fences directly from the front corners of the house to the street fence. These were made of neat pickets, capped over; and there were always three gates; one into the street, one into the garden, and one into the big dooryard. These had to be kept shut, for pigs and cows haunted the streets, and the gate into the large yard was seldom shut. This front yard was the glory of the home; as much a matter of pride as the parlor. It contained, beside the great lines of shrubbery that bordered the path, two or three of the rarest trees—such as honey locust, or possibly a green gage plum tree. This front yard vanished about the middle of the century, about the time that the stock laws began to banish the cattle from the streets. Picket fences gave way to the English board fence before 1850; this to efforts at hedges, which continued until sometime after 1870. These hedges were first attempted with the English hawthorn; but this would neither turn cattle nor endure our dry hot summers. The buckthorn followed, and still is in some use. The *gleditschia* came later, and in a few cases the osage orange was adopted in the Eastern States—much more generally in the West. As the stock laws were enforced, it gradually dawned on the people that they could dispense with the cost of both fences and hedges. Grounds

were gradually thrown open to the highway, and the latter was planted with shrubbery or trees, like private grounds. The drift in this direction is so strong to-day that our highways bid fair to become continuous parks over the whole continent. The grouping of lawn trees frequently runs down to the public driveway; in other cases the orchard or small fruit garden takes possession of the street, so that the traveler finds himself walking or driving through private grounds given to the public.

The hedge era naturally brought in more or less of the grotesque. There was an effort, not got rid of before the latter part of the century, to shear these hedges into fantastic forms, with animals sitting on top. At the same time beautiful arbor vitae and hemlocks and box trees were compelled to exhibit themselves as flat-topped, or square as a dry goods box, or ridged up like roofs, or terraced into pagodas. This reign of false taste, running from 1860 to 1890, was quite long enough, for it spoiled many yards, and mutilated many hedges. A simpler taste came in with the increase of Nature study. The evergreen is now expected to sit flat on the ground, while hedges are used mainly to divide our grounds into lawns, gardens, and retreats. The windbreak is growing in popularity, and is certainly one of the chief needs of an ornamental or fruit-bearing homestead. Shears should touch a hedge only to make it thicker and firmer.

The era of fantastic hedges coincided with the era of geometric gardening. The achyranthes was introduced about 1860; and soon after the beautiful coleus was, unfortunately, discovered—or created. Folk must have great masses of color; and then the lawns were spattered over with moons and stars in yellow, red, and blue. Knolls were leveled to make this carpet gardening more conspicuous. Wealth exploited itself on showy grounds—without taste. This craze was fortunately brief.

Before the stock law had driven cattle out of the street, trees were often mutilated. As a consequence, people sometimes planted the three-thorned gleditschia, which was capable of defending itself, while others set avenues of Lombardy poplar. This tree was introduced by Jefferson, about 1810. The roots ran fifty to seventy-five feet through the soil, spoiling not only dooryards but cornfields; and if scratched they threw up suckers innumerable. By 1830 farmers had made a wiser choice of the sugar maple and the white ash. These began to line our street sides, and if they had been dealt with honorably, would still be the glory of American streets. The maple is very sensitive to wounds, and if trimmed so as to let the sun strike the bark, it will blister. Worms follow, and the latter days of such trees are unsightly. We have unfortunately few good maple avenues left in the country. The ash and the basswood heal over more readily, and make better street trees. The ash is desirable because it puts out its leaves late and drops them early

in the fall; and the basswood is very desirable because its flowers yield such quantities of honey. While the farmers were throwing out the poplar and similar trees, the cities were getting rid of the ailanthus, and adopting the elm. At present the Norway maple and catalpa and basswood constitute a trio of sweet trees pre-eminently excellent—rapid in growth, beautiful in foliage, and not infested by worms.

Modern home grounds are laid out largely on the basis of economy. The shrubs form a "shrubbery," or are scattered in groups to brighten the whole place. We have so many varieties that they can be blossoming in succession, through the whole season; while in winter the grounds are made bright with the berries of the high-bush cranberry, euonymus, and barberry. We find it desirable to plant our roses and most of our flowers in rows that can be cultivated by horse power. The apiary should be in close relation to a basswood grove, with the apple orchard not far away. We know that we can not have success with fruit without the help of the bees. A windbreak of shrubs, such as Tartarian honeysuckle, is both delightful and useful. The front yard is entirely dispensed with, and nearly all fences. The aim is to make the whole grounds about equally beautiful, while not detracting from the useful. Removing the street fences and planting down to the ditch has eliminated weeds and thistles, while the trees no longer need boxing, and the sidewalks are kept clean.

One thing we are now making sure of, that our house grounds in the country are not a modification of city grounds, but are unadulterated country in their makeup; something that one may always look at and say, This place has grown naturally, and man has not interfered, but helped. We have fortunately outlived the artificial; only that here and there we run upon a pretty little lawn run over diurnally with a rattling grass clipper. If anything belongs to the country appropriately it is grass. A lawn cut just often enough to have a good cushion of clover is all right. Do it with a scythe.

I can not but feel that flowers are less beautiful where there is no love, and the love must include the flowers. The old-time mothers identified every flower in the garden for its relation of some sort to the family. The herbs were essential parts of family health; nasturtiums were good for pickles; love-lies-bleeding told a pathetic story to the kindly heart. "I declare," said Mother Williams, "but this grape hyacinth smells like a new-born baby." Spring can be identified by the smell of cherry blossoms. Our mothers had not so much but that they could study and love each thing; living their lives over again in the trees and flowers of their grounds. The children grew up to know everything by such companionable names as heart'sease, baby's head, wakerobin, wallflower, maid in the mist, sweet-william, Jacob's ladder, and were expected always to ask for flowers before taking them—even to the well-loved schoolmistress.





The Dining-saloon Has Paneled Walls from the Floor to the Ceiling Treated with a Greenish White Color Scheme

A "NAUTICAL"

Designed and

John H. D.

Highland Beach,

By Paul



AN INCREASED demand for natural environments, building his "nautical"

The site upon which and faces the Atlantic River at the rear. The

signing of the house "all front." Upon was found that a much better view of height, so it was decided to build the house usually the second floor of a house. and was carried out with an equally happy view of the ocean, the river, and the sun.

The exterior throughout is covered with white. The windows of the first story are pierced with "port holes" and from the interior looking out across the water from the stateroom of an ocean steamer.

The front door is approached from a stone wall as a border, inside of which a



The "Deck" Is Enclosed with a Roped Railing, Red Canvas Curtains, Has Indian Red Walls Against the House and Is Used for Dining Uses



The "Upper Deck" Enclosed with a Roped Railing, Red Canvas Curtains, Has Indian Red Walls Against the House and Is Used for Dining Uses

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Built for

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The Library Is a Very Beautiful Room in the Louis XV Style, with Paneled Walls of French Walnut, and Carvings Relieved with Gold



Around the House with Numerous Accessories
a Real Nautical Character



Nautical Devices are Introduced Above and Below, and Always with
Regard to Utilitarian Requirements



The Dining-saloon Has Paneled Walls from the Floor to the Ceiling Treated with a Greenish White Color Scheme

A "NAUTICAL" HOUSE

Designed and Built for

John H. Duncan, Esq.

Highland Beach, New Jersey

By Paul Thurston



AN INCREASED demand for originality in beauty and comfort, and the requirement for the conformity of a house with its natural environments, inspired Mr. Duncan in designing and building his "nautical" house at Highland Beach.

The site upon which the house is built is treeless and sandy, and faces the Atlantic Ocean in front with the Shrewsbury River at the rear. This situation, therefore, required the designing of the house "all front." Upon very careful examination of the site it was found that a much better view of the ocean might be obtained from a little height, so it was decided to build the house with the main living quarters on what is usually the second floor of a house. This proved to be a very happy thought, and was carried out with an equally happy result, thereby insuring an unobstructed view of the ocean, the river, and the surrounding country.

The exterior throughout is covered with white painted clapboards. The walls of the first story are pierced with "port-holes," which give light to the interior; and from the interior looking out across the sea it reminds one of the scene visible from the stateroom of an ocean steamer.

The front door is approached from a winding road inclosed with a sea-washed stone wall as a border, inside of which are growing grasses. A broad platform in



The Library Is a Very Beautiful Room in the Louis XV Style, with Paneled Walls of French Walnut, and Carvings Relieved with Gold



The "Deck" Is Enclosed with a Roped Railing, Red Canvas Curtains, Has Indian Red Walls Against the House and Is Used for Dining Uses



The "Upper Deck" Extends Around the House with Numerous Accessories Giving It a Real Nautical Character



Nautical Devices are Introduced Above and Below, and Always with Regard to Utilitarian Requirements



A Happy Thought Has the Placing of the Living-room in the Second Story, Thereby Insuring an Unobstructed View of the Ocean at the Front and the River at the Back with the Surrounding Country Beyond

front of the door, with settles placed on either side with arms formed of carved dolphins, carries out the nautical characteristics predominating throughout the house.

Upon "embarking" one finds himself in the "social hall," which has walls ceiled with narrow beaded North Carolina pine, oiled and varnished, while the trimmings are painted old ivory white. A white painted cornice surrounds the room at the intersection of the wall and ceiling.

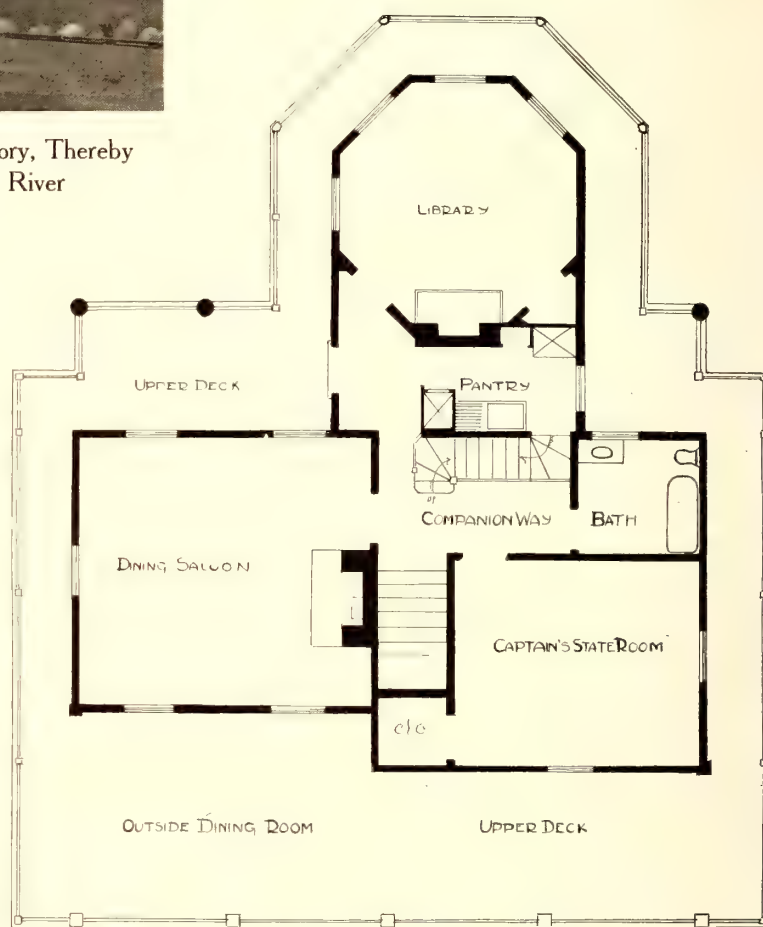
A touch of warmth and color is given to the interior by the crimson velvet covering on the floor and by the crimson upholstered furniture, together with the white bits of statuary. A broad stairway, with white painted balustrades, starts in the center of the room, opposite the front door, and rises to the main floor. To the right of the stairway is the "Purser's Office" and the "Bridal Stateroom," indicated by the brass plates placed over the entrance door of each apartment. To the left is the entrance to the side hall, which communicates with the kitchen, laundry, servants' room, and bath, and the usual necessary dependencies, all of which are fitted with the best modern conveniences. A "lower deck" surrounds this part of the house.



The "Social Hall" with Walls Ceiled with North Carolina Pine, Trimmings of Ivory White and Upholstery and Rugs of Crimson, Presents a Cheery Feeling Upon "Embarkation"

Upon ascending the "companionway" from the "social hall" one reaches the hall of the main floor, from which the various rooms of the house are reached. At the end is the library, which is octagonal in form, and is a delightful room. It is treated in the Louis XV style, and has paneled walls of French walnut with the carvings relieved with gold. The mantel is of Breche-violet marble, which is very finely veined, and is beautiful in its rich and delicate colorings. The ceiling is handsomely decorated, and the room is furnished with furniture of French walnut, which is in harmony with the style of the apartment.

The "dining-saloon" has paneled walls from the floor to the ceiling. The ceiling



is beamed, and between these beams the wall is stenciled in colors, and the whole treated with a greenish white color scheme. The mantel is of Verona red marble. The old pieces of mahogany furniture and the old copper lamp over the dining table are interesting types of the antique. French windows open on to the "upper deck," from which an unobstructed view of the ocean is obtained.

The "deck" is inclosed with a rope railing, the same as is used for steamboats. The entire wall space toward the building is painted Indian red, outlined with a Grecian border. The "Captain's Stateroom" and bathroom occupy the remaining part of this floor, the former being treated in a very dainty and "nautical" manner. The bathroom is furnished with up-to-date porcelain fixtures and exposed nickelplated plumbing.

The Use of the Rose for House Decoration

By Charles F. Holder



DOUBTLESS few of the many professional house designers and decorators in the East ever seriously consider the rose as a factor in their plans or schemes for utility and artistic effect. In California, one of the charms of the country, a charm that gives rise to the most enthusiastic comment, is the decoration of inexpensive homes with roses. In the cities of Los Angeles, Pasadena, San Diego, and many other cities and towns of southern California, are seen numerous small houses, many the homes of laborers. Some of them may never have been

Everywhere in southern California these modest homes are seen; in the heart of Los Angeles, in the suburbs, in country towns, everywhere roses of some kind bloom the year around. I recall one home built by an invalid in the suburbs of a small town not far from Los Angeles. This man had two hundred dollars with which to build. He put up a simple rough board frame house, box-shaped, divided into three rooms—a living-room, bedroom and kitchen. It was a crude affair on the sun-burned mesa, about as unattractive a place as one would care to look at. All the money seemed to have been expended in the house; in any event, the



A Pasadena House Covered with Alfred Carriere Roses

dignified by a coat of paint, but over them is drawn this winter canopy of ineffable beauty transforming them into bowers of color.

You see them everywhere. Great clusters of white roses nod over the fence or cover an unsightly woodshed; roses which if they could be placed on the corner of Fifth Avenue and Twenty-third Street, New York, in the hands of flower venders would sell for more than the value of the building. It is not necessary for the man of moderate means to build an elaborate house, or even paint it if he will but consider the rose as a factor; the money that he might expend in paint becomes much more effective in water, which in liberal quantities about the roots of roses, paints the humble home in marvelous tints and produces an effect at once artistic and beautiful, one that might well excite the envy of the wealthy dweller in lands where the bloom of the rose is not constant.

builder made no attempt to paint it; instead, he ran up from the ground a quantity of wire fencing so that it stood out about two feet from the building. Where the windows were he left spaces, and at this stage the house had the appearance of a bird cage. The next time I saw the place was after the first rains in November. Alfileria and wild grasses had painted the land in greens. The barren board shanty had disappeared and in its place was a blaze of purple. The invalid wanted to "paint" his house quickly, so had planted the big purple Japanese morning glory and other vines that had climbed up over the trellis and covered the unpainted wall with a mass of splendid color. But this was only for a time. All about the house he had planted roses that grew slowly, and upon my next visit the shanty was a bower of roses, literally covered by masses of white and pink climbers that made it stand out as a beauty spot in the landscape.



A Cottage Decorated with White Roses

Those who are only familiar with the rose of the East can form little conception of these flowers in Southern California, which can be made to grow all the time, and many of them to bloom, by providing constant irrigation and dressing.

There is an endless variety of roses, but a greater number of them are unsatisfactory for the purpose of house decoration. Some are "shy" bloomers; others bloom only a short period, while others again are in blossom the year round. While the "Glory of Glazenwood" as it is called in some places, but the "Gold of Ophir" in California, is not a perpetual bloomer, it makes so splendid a display for a month or more, from March to June, according to conditions, the early or late rains, that it is perhaps more often used in house decoration than other roses. It grows thick and bushy, is a rapid climber, and in a short time covers the side of a house with a light green hue, and in February, March or April suddenly springs into bloom and converts the house into a blaze of color which differs in different localities. In all probability the most remarkable display is seen on the home of the late Rev. A. Moss Merwin, of Pasadena, often called the house of ten thousand blossoms. The reader can judge from one of our pictures whether this is an exaggeration. Only a portion of the rosebush is seen and only the full-blown blossoms. A more beautiful picture can not be imagined than this aggregation of bloom that has been visited by tourists from all over the world.

Ranking next to the Gold of Ophir as a house decoration is the Lady Banksia, that has completely covered the side of a Pasadena home and climbed up over the house onto the roof. The effect is even more startling than the Gold of Ophir, as it is pure white or yellow, and is especially adapted for decorative purposes, falling like the willow in long slender branches every few inches, marked by a group of blossoms which hang from the wall or roof in a particularly graceful manner.

This rose is not a constant bloomer, but as an early harbinger of spring is one of the most attractive of flowers. It is a double rose, and while the white variety is the best known, the yellow is a charming flower. The effect of the white Banksia in the late winter, while the summits of the mountains are covered with snow, is very striking, and from a distance a roof covered with them appears to be massed with snow.

Often enough one may see a shed, shanty, or even a cheap stable rendered beautiful by masses of Reine Maria Henriette, a most splendid perpetual blooming red climber. This rose is a cross between the Madame Berard and the well known General Jacqueminot. The leaves are large and lustrous, and the roses often the size of a man's closed hand, rich in shade and shape, both in bud and flower.

In my own garden the beautiful Reve d'Or rose has taken possession of an orange tree and covered it with bloom; and I have seen small houses, crude and bare at the building, covered with this splendid mass of bloom, that in a remarkably short space of time will climb to the top of a two storied

house and ultimately cover it.

Among many other roses often seen in house decoration in Southern California are the climbing Wootton, Safrano, Malmaison, Madame Alfred Carriere, Marechal Niel, Wm. Alfred Richardson, and Kaiserin Augusta Victoria, the latter a white rose of vigorous growth, the blossom large, pure white and very beautiful. I have seen an inexpensive lath house, used for potting plants, covered with these magnificent white roses; also the Lamarque, a most vigorous climber and bloomer here.

While roses constitute the principal decoration for many inexpensive homes in California they are also seen about the most pretentious ones, and other flowers as well. About such places will be found fences of the small Cherokee and the Ragged Robin, the latter blossoms a beautiful red that contrasted with white makes a most effective hedge, all being important features in the landscape.



A House Covered with Ophir Roses

“Phelcroft”

The Residence of Professor A. C. Phelps, Ithaca, New York

By Francois Picard

“PHELCROFT,” the home of Professor A. C. Phelps, at Cornell Heights, Ithaca, N. Y., is situated on the southwest slope of a hill overlooking the valley and Cayuga Lake. The idea of the owner, who designed the house, was to build a simple, unostentatious home, fitted to the surroundings and environments, and embodying, without affectation, something of the home feeling to be found in the old Dutch Colonial houses of Long Island and New Jersey.

The site is conspicuous, being surrounded on three sides by public roads, and it seemed desirable to avoid anything like a “back-door” treatment at the rear, but without concealing or disguising such necessary parts of the house as the kitchen and rear entrance.

The external walls are built of local stone, which is a blue slaty limestone. The stone employed was taken from an old mill-dam and laid so as to expose as much of the weathered and water-worn surface as possible. The joints were not pointed, but raked out with a blunt stick at the time of laying, so as to avoid the appearance of mortar with which the stones

were laid. The roof is covered with red stained shingles, and the gables and dormers with white cedar shingles left unstained to weather a silver gray color. A growth of Japanese ivy has been effectively started on the stone walls.

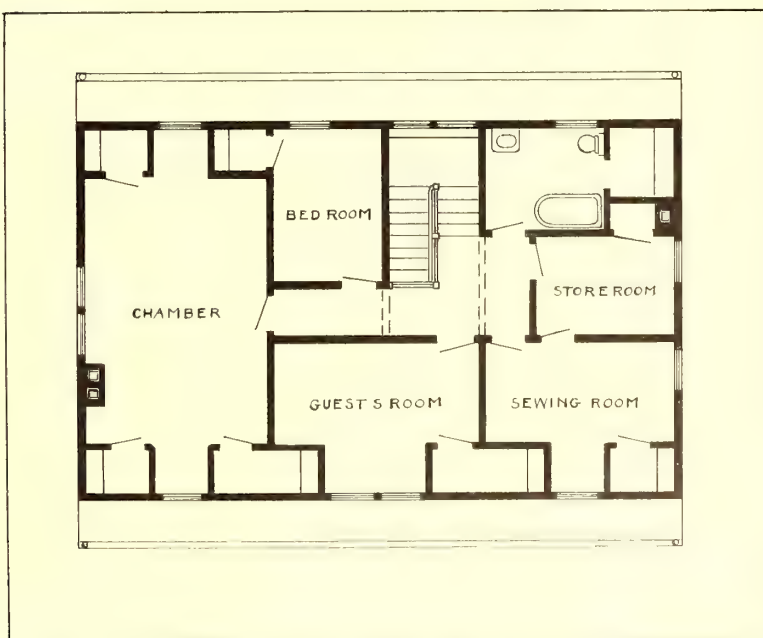
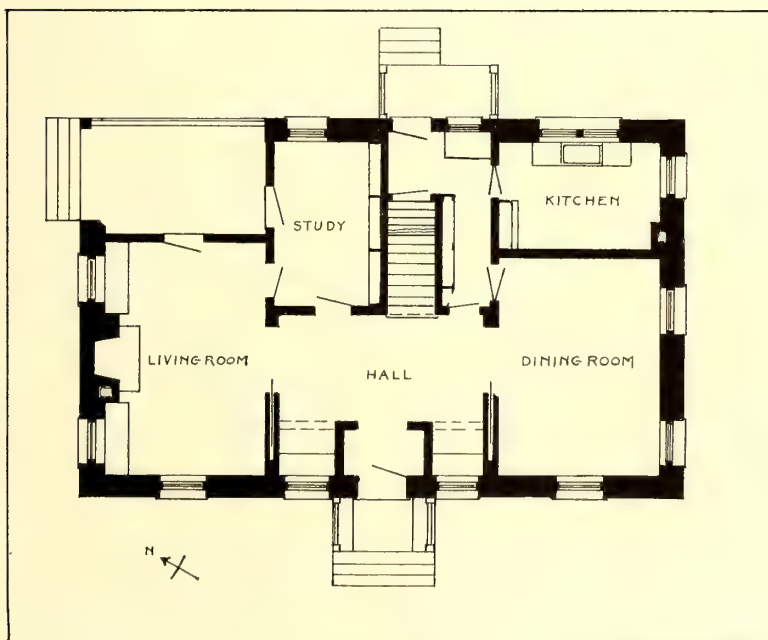
The house was planned to accommodate a small family. The floor plan is twenty-eight feet by forty-four feet, external dimensions; the arrangement being shown in the accompanying drawings. The living-room, front hall, and dining-room form practically one large room extending the whole length of the house, with the study at one side, having a separate entrance from the veranda. Sliding doors are provided to shut off one room from the others when desired.

The effect upon entering the front hall is not that of a lack of room, so often felt in small houses, but of the feeling of spaciousness on account of the openness of the plan. The kitchen, though small, is well lighted and ventilated and conveniently arranged.

The second story plan explains itself. The large family chamber is toward the lake. Besides this there are four rooms that can be used as bedrooms, but two of which are occupied as a sewing and store room respectively. A large linen closet opens off from the bathroom,



A Simple Porch with Seats Forms the Entrance to the House, of Which the Walls Are Built of Field Stone





A Glimpse of the Living-room Through the Hall



The Hall and Den, as Seen from the Living-room

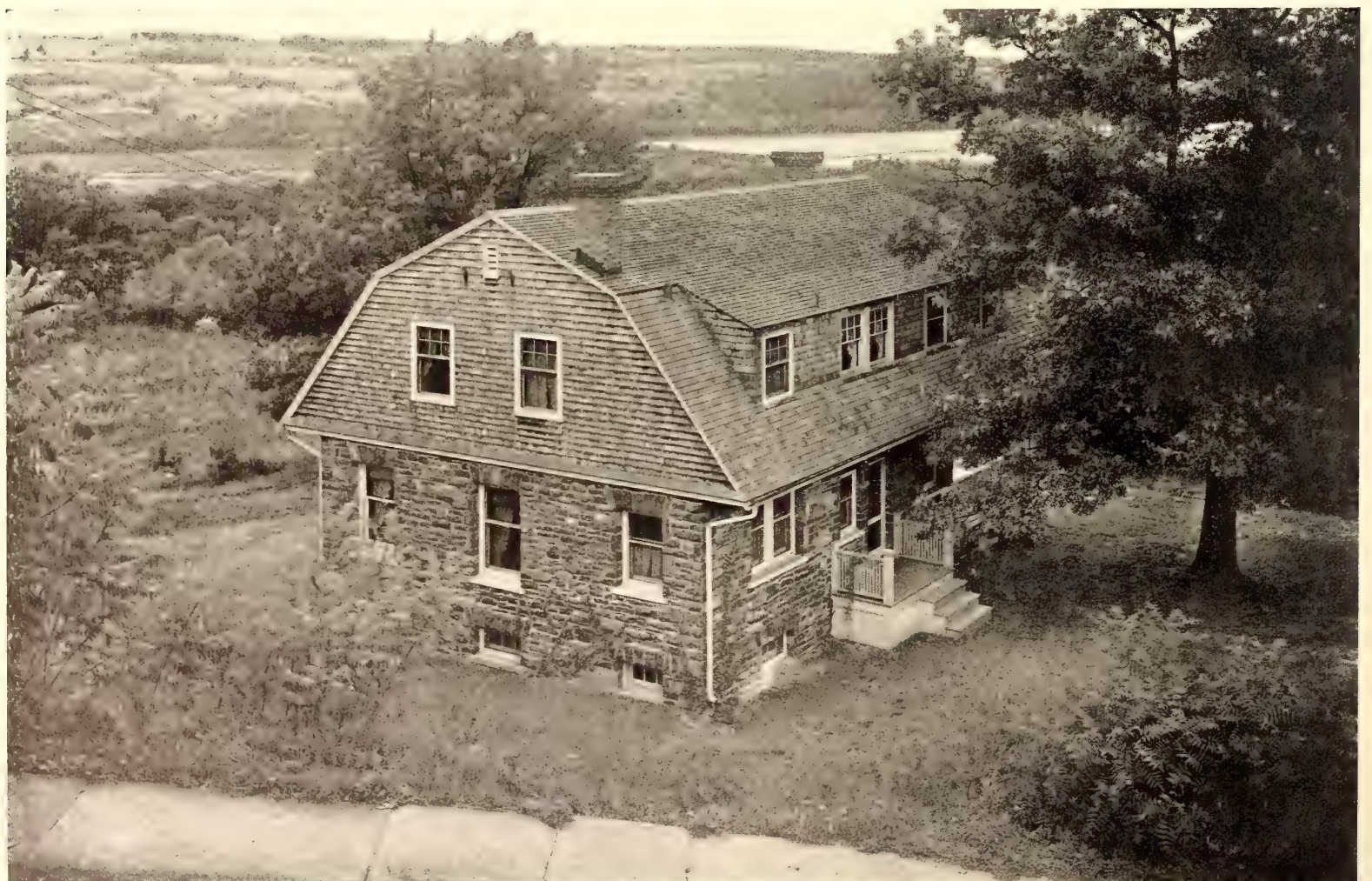
and each of the other chambers is provided with ample closet space, fitted with shelves, hooks, and clothes poles.

The principal rooms of the lower story have floor and trim of red oak stained a soft green, finished with wax. The walls are covered with plain ingrain papers, except those of the living-room, which has a frieze of Oriental tapestry paper. The fireplace in this room is faced with unglazed Mercer tiles having great variety and harmony of color.

The second story rooms have floors and trim of stained

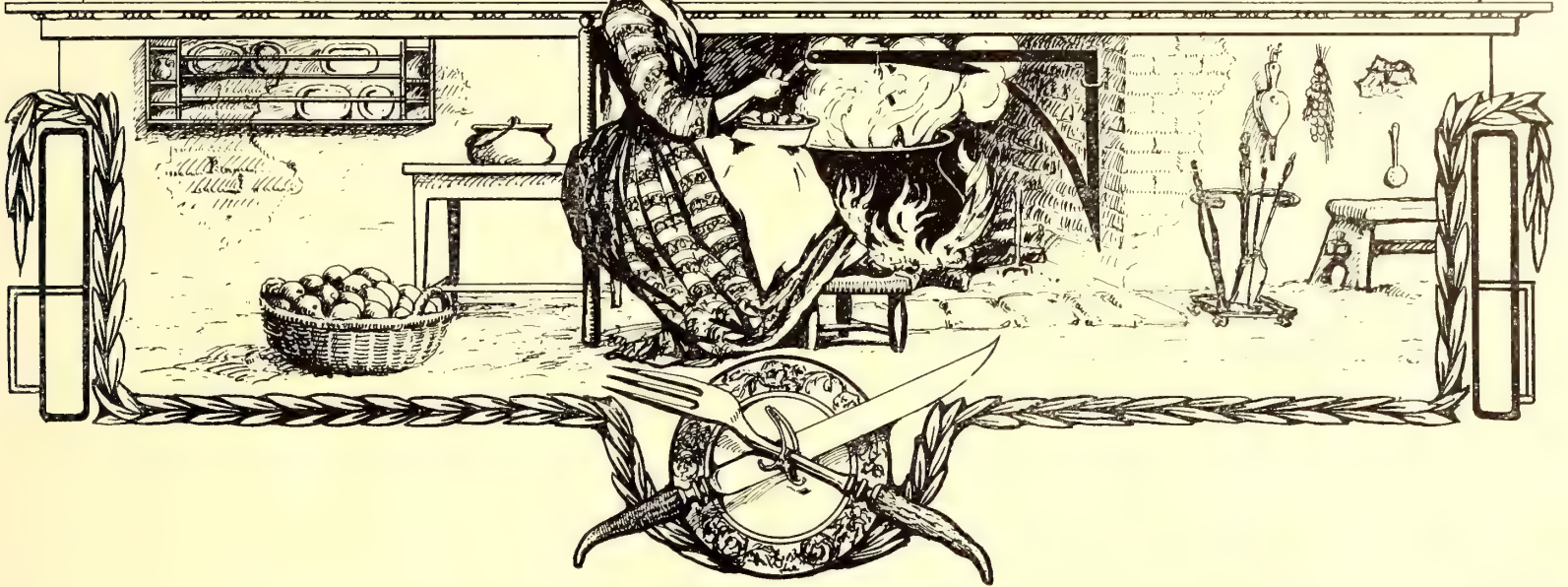
Southern pine, finished with wax. Heat is provided by a superior warm-air furnace, and the house is lighted with electricity.

The house is thoroughly well built and finished in every respect, the intention being not to build as cheaply as possible, but to consider real economy in maintenance. The total cost, including heating, plumbing, electric wiring and fixtures, kitchen range, and window and door screens, was nearly six thousand dollars.



The Dutch Colonial Is the Prototype of Mr. Phelps's Home, Which Is Built on a Hill Overlooking the Cayuga Lake and Surrounding Country

Kitchens Of The Olden Time



By Esther Singleton



NE of the most attractive rooms in the Colonial house is the kitchen. The logs burn brightly in the great fireplace, their flames flickering across the shining copper and brass pots suspended from their cranes and hooks above the fire, and throwing bright reflections on the rows of polished pewter dishes arranged symmetrically on the shelves of the dresser in company with blue and white earthenware. The high-backed settle placed at right angles to the fireplace invites us to rest and watch the cook as she bastes the birds that are roasting on the spits. Delicately prepared vegetables are bubbling in the various pots and delicious sauces are simmering in saucepans. The fine breads, puddings, and pies that have just been removed from the brick oven, stand on the kitchen table covered with a fresh white cloth and contribute not a little to the other appetizing odors. We feel sure that when we retire to the dining-room, a very delicious dinner will be served, accompanied, moreover, by choice Madeira, Sherry, and Port from the host's well stocked cellar.

In the Colonial period, the kitchen in the wealthy home was practically the same throughout the country, except in New York, where the influence of the Dutch is felt. At a later period the New England kitchen becomes a general family living-room, while on the Southern plantations it is rarely visited except by the mistress of the house. In that part of the country, a black deity, crowned with a bandanna turban and attended by a retinue of under cooks and little pickaninny scullions reigns supreme. Sometimes neither the cook nor the kitchen are remarkable for tidiness, but the pots and pans are scrupulously clean and the culinary results are perfect. The children of the house are her chief visitors and she welcomes them with assumed ill-temper, but delightedly makes some special dish for them,—an "ash-cake," wrapped in cabbage leaves and baked in the burning embers, or a delicious "corn-pone," while the canvas-back duck is roasting by the fire and the beautifully light "Maryland biscuits" (beaten with a flat-iron), are baking in the "Dutch oven."

The early inventories and letters of travelers show that there was much elegant and fashionable living in New England. In the richer type of house, the hall, and not the

kitchen, was the general living and reception-room. There was also a parlor, which was reserved for privacy and for intimate conversation. A typical hall, described in 1670, in a home near Boston contained a rich table covered with a "carpet," with "five joint stools under it," four leather chairs, one small and one large joined chairs, four expensive green chairs and green stools adorned with silk fringe, five green wrought cushions, three chests, and a looking-glass. There are also a dining-room and a small parlor, and there is a separate room for the kitchen.

Another example will prove that the kitchen in an ordinary home was a distinct room. In 1718, Mr. John Mico, of Boston, has a twelve-roomed house, containing a handsomely furnished dining-room, a hall, which seems to be the living-room, as it has in it eighteen chairs, a desk, and a "little tea-table with china on it." The kitchen is furnished with a pine table, six leather chairs, a looking-glass, and an oak table.

In restoring the historical houses in their possession, the various patriotic and historical societies have appreciated the importance of the kitchen; but in some cases their arrangement of the old-fashioned cooking utensils has made the room more of a museum than a practical kitchen. One of the most successful is that in the Longfellow House in Portland, Maine, which was built in 1785-1786, and is here represented. This is as typical of our Southern as of our Northern ancestors, representing a kitchen of the wealthiest class, in which the meals were prepared by the servants for the family. First, we note the large fireplace, with the ovens in the wall, the crane on which the pots hang, the long spoons, the gridirons, the tin-kitchens, the waffle-irons, etc., etc. Behind the waffle-irons and tin-kitchen on the left stands a plate-warmer with the door open showing the shelves on which the plates were placed. On the extreme left, in front of a tin-kitchen, is a foot-warmer, made of sheets of perforated brass fitted into a wooden frame. Filled with glowing embers, it was carried to church, to the theater, and also used in the coach and in the rooms as a warm foot-stool. Beneath the closet over the oven is a utensil for carrying hot coals. The bottom of this is perforated. A similar one hangs on its left above the tin-kitchen. Next comes a familiar poker, and then follow a gridiron, a dish, a cup, candle-molds, a dish,

and below it a lantern, a steelyard for weighing meat; and, on the shelves, a watering-pot, a flour scoop, cooking utensils, a mortar and pestle, and a coffee-mill. Near the old bell on a wire hang dish covers. The dresser on the right is appropriately furnished with useful articles.

New York being settled by both Dutch and English colonists, the kitchens in the early days were furnished in the Dutch or English style, and sometimes presented a mixture of both races. Many Dutch culinary utensils became necessities, such as waffle-irons, as their dishes found favor on English-American tables. The Dutch kitchen was gradually supplanted by the English, and by the middle of the eighteenth century the kitchen of a well-to-do family, of which the Van Cortlandt is a good type, was English in character.

The influence of the Dutch in New York homes is noted by the New England traveler, Madam Knight, who visited New York in 1707, and recorded her impressions. She was interested in the construction of the houses, which differed from those she was accustomed to in Boston. She particularly noticed the chimney-pieces

and the great use of tiles. "The house where the vendue was," she writes, "had chimney-corners like ours, and they and the hearth were laid with the finest tile that I ever see, and the staircases laid all with white tile, which is ever clean, and so are the walls of the kitchen, which has a brick floor."



Washington's Kitchen at Mount Vernon



Kitchen of the Longfellow House at Portland

This lining of white tiles shows that the kitchen was Dutch, and, moreover, the inventories of the Dutch colonists of New Amsterdam, with their enumeration of copper, brass, earthenware, china, porcelain, and great cupboards or cases (*Kas*), show that the typical Dutch kitchen was anything but uncommon. When the Dutch kitchen is pan-

eled a bed is often concealed in the woodwork, and the kitchen, therefore, serves as a sleeping, sitting, and dining-room, as well as a place for the preparation of meals. This kind of kitchen may be seen to-day in Holland; and in New Amsterdam the kitchens of the Dutch colonists were arranged like those they left at home.

A good example of a New Amsterdam living-room of the seventeenth century is that of the wealthy Cornelis Steenwyck, who died in 1686. His eight-roomed house was very luxuriously furnished. The "kitchen chamber," evidently the common family living-room, contained an oval table covered with a woolen cloth, twelve chairs, five of which were Russia leather and three matted, a bedstead with curtains hung on iron rods, a *Kas*, two small trunks, a chimney cloth, a looking-glass, a glass lantern, three wooden racks for dishes, a "can-board with hooks of brass," and a great deal of linen and earthenware. There was also a "cellar kitchen"



below. Among the cooking utensils his inventory describes "tin ware to bake sugar cakes" and "a marsepyn pan." The latter refers to the sweet confection made of almond paste and sugar in a variety of forms, known as marzipan, or marchpane, an old European sweetmeat, and a particular favorite in Germany at Christmas. The "marchpane pan" frequently occurs in the Dutch inventories, which also mention apple-roasters, chocolate-pots, cake and pie pans, sugar-cake pans, posset-pans, strainers, kettles, fish-kettles, skillets, numerous kinds of pans, spits, jacks, pots, funnels, colanders, spice-boxes, steel to strike fire with and tinder-box, candle-box, rack, kettle-bench, "boards to whet knives upon," spoon-rack, sand-box, tobacco-box, "thing to put spoons in," hour-glass, weather glass, rolling board for linen, foot-warmers, and all kinds of measures.

It may be interesting to learn of what the kitchen furniture of Captain Kidd consisted. The famous (and newly married) pirate lived, in 1692, on what is now Nassau Street, in New York. His house was luxuriously furnished. His kitchen contained three pewter tankards, four kettles, three chafing-dishes, two iron pots, one skillet, one spit, one jack, one gridiron, three pairs fire irons, one flesh fork, one brass skimmer, one brass pestle and iron mortar, five pewter basins, two and a half dozen pewter plates, thirteen pewter dishes, three box smoothing irons, and five leather buckets. In the cellar were three barrels of cider and one pipe and a half of Madeira wine.

The house of the prosperous merchant in New York generally consisted of two stories containing seven or eight rooms. Sometimes the kitchen was in the basement, sometimes it was at the back of the house, and sometimes it was in a separate building, and over it were the servants' rooms. This is made perfectly clear by the advertisements of houses for sale. For instance, in 1754, a dwelling-house on Pearl Street "is two stories high and has two rooms on a floor with a kitchen back." Another in the same year is built of brick and stone, had three rooms on a floor, seven fire-places, and "a good kitchen." In 1761, Mr. Thomas Duncan's house "in the Broad-Way" is two rooms deep and has "a good cellar and a cellar kitchen underneath."

Another arrangement occurs in the house of Peter Jacob Marius, a Dutch merchant who lived on Pearl Street. He added a large kitchen to the side of the house in 1700, with cellars below and rooms for the servants above.

Mr. Abraham Lodge, a lawyer, had, in 1750, a two story brick house with basement. The dining-room was on the first floor, and was handsomely furnished with mahogany and blue china. The kitchen was in the basement, in the front, while the cellar, wine cellar, and general storeroom



Kitchen of the Van Cortlandt Manor House
Van Cortlandt Park, New York City



An Old Fashioned Oven

were in the back of the basement. The house that Abraham de Peyster built in 1695 in Pearl Street had the kitchen in a two-story extension, appropriated to the negro slaves. Kitchens are often mentioned in advertisements. The news-

papers in 1767 stated that Edward Smith owned a beautiful country-seat about a mile from New York. The dwelling-house contained "five rooms, four of which have fireplaces, with a good oven in the kitchen"; and, in 1760, Joseph Bowne's house in Flushing was described as a large dwelling "furnished with nine rooms, five of which have fireplaces with a large kitchen adjoining to the same."

Among the cooking articles advertised in the New York newspapers from 1750 to 1765 are coffee mills, "wafel irons," corkscrews, bread baskets, sugar cleavers, polished copper chafing-dishes, baskets for plates and baskets for knives, copper tin kitchens with stands, and "japanned plate-warmers, very necessary in this frigid climate." The plate-warmer, however, was not a novelty, for as early as 1729 it appears in the inventory of Governor William Burnet, whose kitchen also contained "a plate rack, a horse for drying clothes, an iron coffee mill, and a screen to set before meat at the fire."

An interesting kitchen of this period is in the Van Cortlandt House, near Yonkers, now Van Cortlandt Park, New

York City. This house, owned by the Colonial Dames of New York, was built by Frederick van Cortlandt in 1748. The heavy oak beams and the fireplace, with its brick oven, are original; but the articles have been collected from various sources. The dresser on the left came from Perth Amboy. A good clock without a case hangs on the wall, and beneath it is a warming-pan. Next to the lanterns and above the bread-shovel are three waffle-irons. Other utensils are arranged on the chimney-piece, and among them is a powder-horn. Various fire-irons hang above the fireplace, to the left of which is a pair of bellows. On the extreme right is a churn. A brass kettle and candle-molds stand on the table. The floor is covered with a rag carpet.

The Southern inventories show that the Colonial settlers of that part of the country owned a great deal of pewter, brass, and copper of considerable value. Two examples will suffice.

Colonel Stephen Gill, of York County, Va., in 1653, had in his "kitching" one copper kettle, one old brass kettle, one brass pott, three brass candlesticks, one brass skillitt, one small brass mortar and pestle, one brass skimmer, one brass spoone, three old iron potts, one small iron pott, three pesites, one frying pann, two spitts, two pair of potthangers, three pair potthookes, one iron ladle, one flesh hooke, three tinn cullunders, forty-six pounds of pewter, four old porringers, nineteen pewter spoons, four old pewter tankards, one flaggon, two salt sellers, six tin candlesticks, two dozen old trenchers, and two sifters. Colonel Gill had seven slaves.



The Hearth
of An Old
Rhode Island
Kitchen

With Warming
Pan and
Bread Shovel
Still in Use

York City. This house, owned by the Colonial Dames of New York, was built by Frederick van Cortlandt in 1748. The heavy oak beams and the fireplace, with its brick oven, are original; but the articles have been collected from various sources. The dresser on the left came from Perth Amboy. A good clock without a case hangs on the wall, and beneath it is a warming-pan. Next to the lanterns and above the bread-shovel are three waffle-irons. Other utensils are arranged on the chimney-piece, and among them is a powder-horn. Various fire-irons hang above the fireplace, to the left of which is a pair of bellows. On the extreme right is a churn. A brass kettle and candle-molds stand on the table. The floor is covered with a rag carpet.

In the Southern States the kitchen was universally situated in a separate building some distance from the house, to which it was often connected by a covered way. The separate kitchen is noticed as early as 1734 by Hugh Jones, who published "The Present State of Virginia" in London that year. "The gentlemen's seats," he writes, "are of late built for the most part of good brick and many of timber, very handsome, commodious, and capacious; and, likewise, the com-

Comparatively few old kitchens are left in the South. The example from Washington's loved home at Mount Vernon, reproduced by the courtesy of the Mount Vernon Ladies' Association, has suffered little change. The brick floor and fireplace date from the building of the house in 1743.

An old Rhode Island kitchen is shown in two views. The fireplace is well shown in one, where the pots hang properly on the hooks and the andirons or fire-dogs are of simple iron. On the right are a warming pan and bread shovel. A view of the same oven is shown in another view where the cook is putting a pie in it.

Another photograph represents a somewhat fancifully arranged kitchen of the nineteenth century—an attempt to revive the old kitchen living-room. The beams, wall, and stairway of the ancient room are preserved. In the center of the room stands an oak table of the "thousand legged" variety; an old clock and mirror adorn the walls, and also some pewter platters, which should be arranged in a dresser or in a rack. A lantern hangs from the beams, which is perfectly correct, but the place for the foot-warmer is certainly on the floor.

THE EASTER FLOWER MARKET OF NEW YORK.

By WILLIAM G. FITZ GERALD.



RUNNING one's eye over the dainty tables of a smart restaurant, or a fashionable church turned into a fragrant bower of violets and roses for a wedding, one wonders vaguely at the extent of the flower traffic of the world's richest city, where "American Beauties" command thirty dollars a dozen at retail in winter, carnations six dollars, and cattleya orchids fifteen dollars a dozen.

And one is amazed to find there are in the city over two

from far-away orchards of semi-tropical Tampa or Pasadena. The flower artist's men—a round dozen of them in felt slippers—glide round the silent church, dragging twenty-foot palms, each tub strategically labeled, and with its base destined to be buried in blooms with every ugly corner hidden by tufts of dainty isolepis grass. Outside are his luxurious motor-vans, all plate glass and gilding, and each heated so that the delicate immigrants of a day may not sicken and droop in the icy air.

Chart in hand the foreman appears like a ship's captain directing his crew, and in a couple of hours the magical transformation is wrought. Then back to the bride's home, where the floral wand works similar wonders; and lastly the lovely "shower" bouquet, representing the last word in scientific floriculture.

True, those snow-white orchids came from New Jersey or New Rochelle—one of hundreds of flower "farms" under glass, representing an investment of twelve million dollars within the ten-mile radius from City Hall. But trace those superb floral stars back further yet, and you will find yourself in Venezuelan wilds. Here a New York orchid hunter like Sachse, Massmann, or



What a Hailstorm Means to a Flower Farm

hundred and fifty retail florists with an annual turnover of one hundred and twenty-five thousand dollars, and many more who do at least sixty thousand dollars' worth of business. Any one of these men thinks little of a thousand-dollar order for a wedding, turning church or home into a lovely garden of *Lilium Harrisii*, hydrangea, chrysanthemum, cyclamen, lilac, hyacinth, and even natural orange-blossom



How the Air Feeding Orchids Are Propagated



A Harvest of Single Daffodils



A Cartful of Lilies on a Bermuda Lily Farm

Lager will be found risking his life daily for months on end in the little-known Carribean Mountains, where marvelous flowers that imitate butterflies, beetles, and birds show bright against the dark tropic foliage of dense forest trees.

It is for New York, too, that little Bermuda grows her millions of lilies, yielding her one hundred and twenty thousand dollars a year. Floral Bermuda, whose glories were sung by Shakespeare, Marvell, and Moore. A wondrous sight indeed is a thirty-acre field of Easter lilies near Hamilton, the island capital. Though no scientists, the flower farmers here produce, through sheer aptitude of the soil, astonishing freaks of richness.

I saw in a lily field near Hamilton one magnificent specimen with no less than one hundred and forty-five perfect blooms on a single stalk! Bulbs planted in the fall are by March grown into a mass of lilies, ready for packing in boxes with many subdivisions so to prevent crushing on the long journey to New York, where they grace our Easter altars and homes. Usually these Bermuda lilies are packed in boxes of five dozen buds, each box not more than one cubic foot in size, nor weighing more than fifteen pounds. Such a box costs two dollars and ninety-five cents for duty and expressage right into New York City.

In the last forty years our demand for flowers has increased eight hundred per cent.; and to-day this charming traffic in the metropolis alone is worth three million dollars a year. Not less than thirty wholesale firms handle New York's cut flowers; and as much as thirteen thousand dollars' worth will be sold in a single day. In one great consignment I saw one hundred and twenty thousand roses, two hundred and ten thousand carnations, four hundred and twenty-six thousand violets,

and twenty-five thousand lilies of the valley; besides larger lilies, with lilac, mignonette, orchids, and a vast green accompaniment of smilax, adiantum, and asparagus plumosus.

Nine growers alone will send five million roses to make fragrant the city's heart in a single season. The center of this great trade lies between Twenty-third and Thirtieth Streets, Broadway and Sixth Avenue. Quite ninety per cent. of this immense supply is grown under glass, of which the State as a whole has four million five hundred thousand square feet belonging to perhaps one thousand four hundred growers.

The roses come from Madison, Chatham, and Summit, N. J.; Scarborough, N. Y., and various places in the vicinity of Hoboken and Jersey City. From Long Island townships come our magnificent carnations. Queens and Flatbush in Brooklyn are great sources of supply, as also are Elmhurst and Newtown. Quite two million dollars is invested in the country in carnation culture alone; and new varieties are constantly being introduced. The profits are large; a carnation sold wholesale at thirty-eight cents will fetch one dollar in the palatial establishments of the fashionable florists.

Rhinebeck, Poughkeepsie, Highlands, and the Hudson section generally are most successful with opulent and delicate violets. There is one house at New Rochelle with two hundred and thirty thousand square feet of glass, under which are grown superb orchids and palms, with ferns, rare greenhouse plants and garden roses. Altogether the State's great sea of glass is worked by perhaps one thousand five hundred different establishments, employing quite an army of men.



A Corner of a Bermuda Lily Field



Planting Lily Bulbs for the New York Flower Market in Bermuda

The glass, by the way, is a serious item of cost; one hail-storm may destroy almost every pane; and on that account some insurance was looked for at an early stage of the business. But in the peculiar nature of things, no ordinary commercial concern would take the risk, and so the florists of all America formed a Co-operative Association for Mutual Hail Insurance.

Each member pays an entrance fee of two dollars, which entitles him to protection for two thousand square feet, with fifty cents extra for each additional thousand. And in 1905 the association paid out claims to the value of nearly twenty thousand dollars for glass broken by hail. The seasons vary in a



One Use to Which Flowers Are Put. A Motor Car Entirely Decorated with Roses and Lilies for a Floral Carnival



Bunching Narcissus for the New York Market

remarkable manner. Thus, last year was the smallest on record—barely half the damage done in 1905. But New York rarely escapes without one thousand dollars' worth of broken glass.

And there are many other serious risks to set off against the profits—undeniably large as they are. Thus, a coal strike may mean ruin; for while the factory manager can shut down indefinitely, fires must be kept up in the vast glass-covered galleries of delicate roses and lilies. Let the heat but fade for an hour on an Arctic day, and

the thousands of floral lives are sacrificed.

Various substitutes for coal have been tried, but with indifferent success. Wood, charcoal, sawdust, straw, cane, and cotton stems—all were given a turn; but crude oil was found the nearest approach to coal in point of efficiency and economy.

Then there are insect pests to be fought; the hexapoda with solutions of arsenic; the rose-chaffer with paris green; the gall fly and red spider with whaleoil soap and tobacco. Labor, too, is a serious item in these days of specialization, which is par-



A Corner of the Flower Farm in Harvest Time

ticularly strong in floriculture. One man to every one thousand five hundred square feet of glass is the average; though many more are needed if the crop be violets, for the little plants must be kept clean and the delicate flowers picked with extreme care.

Fortunately the harvest of flowers has every advice and attention from the experts of the Bureau of Plant Industry at Washington, who place at the disposal of growers all the secrets of foreign flower culture in the French Riviera; in the nurseries of Holland, which are actually lower than sea level; on the seed farms of Germany, and in Belgian nurseries, which do so large an international trade in potted azalias, begonias, lily bulbs, and gloxinias.

When the flowers are ready for market they are consigned by the growers to the city wholesalers, whose fifteen per cent.

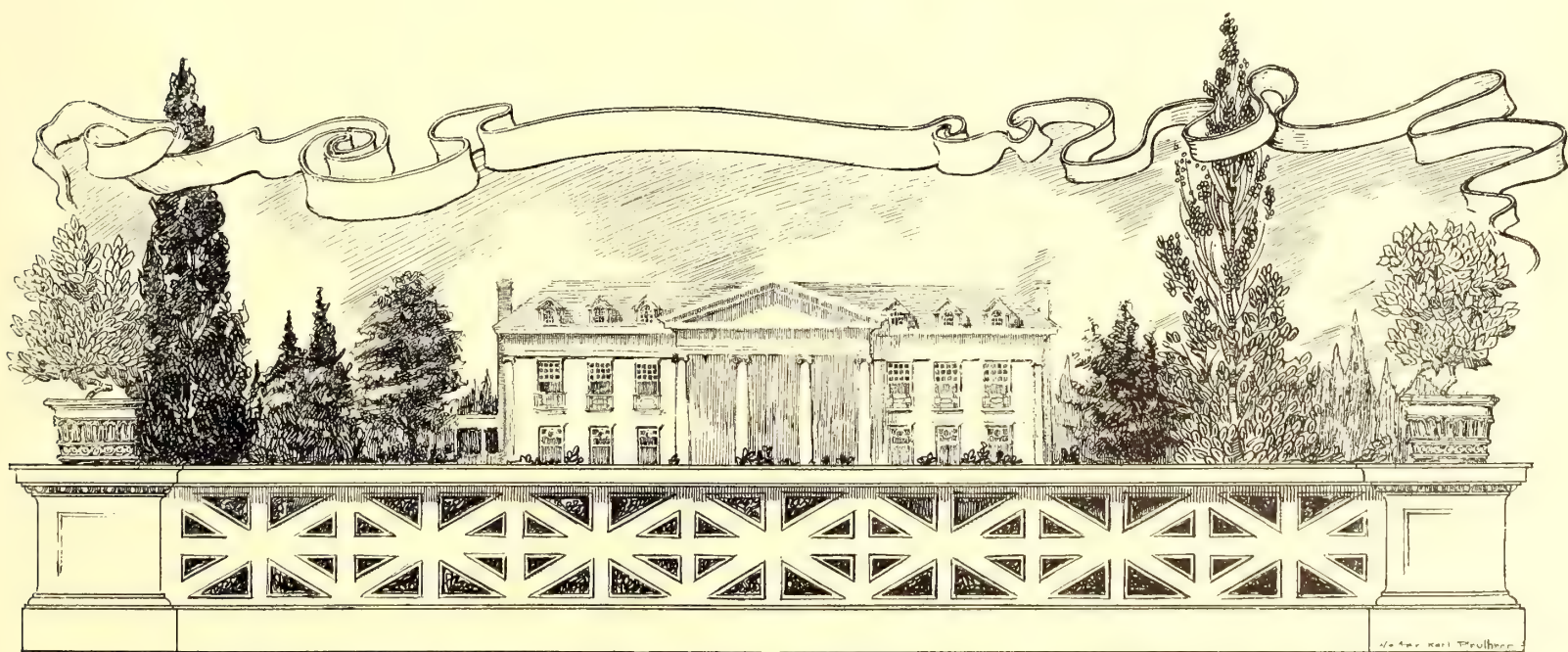
commission must cover heavy rent, cold storage, appliances, boxes, ice packing, advertising, and labor. Perhaps the most important single concern in the city is a co-operative association which grew out of the restaurant headquarters for flowers. There are one hundred and fifty members, and these handle eight hundred thousand dollars' worth of cut blooms every year.

The florists of New York City, by the way, are something more than mere keen and intelligent men of business. They have a genuine love for the beautiful, and have unquestionably done much to improve public taste and spread true appreciation of flowers throughout the city's millions. It was by reason of their efforts that the hideous

formal bouquet of other days passed away—a strange bunch of camelias and tube-roses in a cardboard funnel edged with silk!

Nowadays flowers are massed with a delicate and accurate appreciation of color values; while one has but to look in the window of any one of New York's palatial floral establishments to realize that the men who handle a business so significant of the nation's taste are themselves natural born artists of no mean order.

And on every hand there is an increased appreciation of flowers. No show windows are more attractive than those of the city florist, who will often crowd his windows with his choicest blooms. The floral beauty of many a wedding, ball, or other festivity will carry its message of beauty to the sick in the hospitals and even to the poor in their homes.



My Bird Family

By Craig S. Thoms



SEVENTEEN children are a good many for a twentieth century family; yet this is the number of birds that regularly come into my backyard, and for whose visits I watch as eagerly as ever did mother for returning sons and daughters.

In the spring the bluebirds are the first to greet me; they usually come in late March to peep in at last year's nest, which they built in an old flicker hole that I found in a dead branch and set up in my yard for them. They found their nest as they had left it in the autumn, and seemed pleased. During April they are in and out every few days to make friendly calls, and to see that no other birds usurp the nesting place where they successfully reared last year's brood. Nearly every time they come they have a passage at arms with the English sparrows, just to keep them well reminded of the many times they were whipped last year. Although the sparrows are numerous, strange to say, none of them dare to build in the blue-

the sweetest notes that bird ever uttered, tell me that love never changes, that it is the same in winter as in summer, and as faithful in plain plumage as in gay.

The wood-thrush calls very informally. He slips in to the back fence, perches there a while, and looks at the house wistfully to see if I am at home. Bless his heart! He has come to invite me to the ravine grove—which is to hold his nest—to hear his matin songs. And I'll go; for there are no songs like his, save that of his near cousin—the hermit-thrush. It is a song of the heart, and of the truest, sweetest, and most innocent heart among all the feathered folk. It is an evening prayer of thanksgiving—such a mingling of hope, contentment, and thankfulness as I have heard from no other voice in Nature.

One morning in May, as I look out of the window, I seem to see many wood-thrushes; but upon looking more closely, I observe that they are a little smaller, slightly more olive-colored, and not so heavily spotted upon the breast. The veerys are migrating.



The Bluejay Carries off Your Suet in Winter



Wilson's Bluebird, the First to Arrive in the Spring



The Catbird Comes from the South During the Last Week in April

bird's home, though the bluebirds are absent for days at a time. The question of ownership was settled last year in many encounters in which the bluebirds demonstrated their powers, and now the sparrows keep at a respectful distance.

What dear old friends the robins are! plain, honest, sociable. How could we keep our lawns and gardens without them? Their train is on time every spring, and the same ones, accompanied by others, alight at the same depot. Home again! and a thousand times welcome. "Have a drink from the pan at the hydrant; snatch a worm from the lawn; take a bath in the wooden trough; sing from the same old tree and build your nest among its shady branches; your young I'll protect if I have to kill every cat in the neighborhood."

The goldfinches peep in on me every spring just to tell me that they have not been far away, but did not like to be seen until the homely, work-a-day garb of winter had been discarded for the new wedding suit of gold and black. They perch upon my gate; swing upon some long spears of grass by the back fence; take a sip of water from the trough; and, in

They have dropped down out of the dark—for most birds migrate at night—to rest and feed and renew old associations. I see them every year, whether the same ones or not, I can not say. For a few days the premises are theirs; they hop along the walk, perch upon the fence, rest upon the woodpile, come to the very door as though for food. Then next morning, or a few mornings after, when I look for them, they are gone. Farther north you will find them singing love songs and building nests.

Every spring the catbirds look in from the back fence in about the same way. I see them first on the lower board. Evidently they want to survey the premises without being seen. When satisfied it is really the same place that they left in the autumn, and that they will be as safe here this year as last, they scud across my neighbor's lot to explore the prospect of a nesting place in the bushes that skirt his garden. Their visits become regular now, and the birds grow bolder with each meal. Their favorite hopping place is the cap-board of the fence at the back of the yard, where they are

safe from tabby, and can see what enemies or rivals are about. When the coast is clear, they dash across the lawn to take a sip of water from the pan under the hydrant's dripping nozzle, or snatch a morsel of food from the dish on the raised platform that I made, lest my neighbor's cat steal upon them unawares. Often a strain of music rewards me for my attention to their wants, and their finest selections—for the catbird has many—are usually given on cloudy or rainy days, when, seemingly, they think I need them most.

Whether the catbird or kingbird calls on me first, I do not remember, but there is not much difference. Do birds know that we care for them? They seem to feel so contented and protected when near us if we do. Some morning in May, as I study at the open window, I hear a familiar "Bee-bee-bee," and, looking out, there sits the kingbird on the identical spot on the clothesline wire that was such a favorite place with him last year; and he seems to feel as safe as though all my time were spent in guarding him from harm. His notes are not a song, for he is not from a singing family, but just to apprise me of his presence, and let me know that he has run the gaunt-

their blossoms, perfumes, and songs, flashed into my imagination in a twinkling, and I lived them through and through in a moment.

Last year a pair of Baltimores built in the tip top of my corner tree, and came regularly to the meals of boiled egg-yolk and breakfast food that I prepared for them. They were generous in repayment, for the male favored me daily with his exuberant songs; and when the young came off the nest two of them were considerate enough to fly down upon the lawn—presumably in their efforts to reach a distant tree—where I secured their photographs.

For a little while each spring the worms seem to be getting the better of my box elder trees, sometimes almost stripping them of leaves; but I am compensated in part by the songs of the rose-breasted grosbeak that feeds and sings by turns in their high tops. What a smooth, flowing, limpid strain it is! Yet, at times in the ardency of his love it rises so nearly to the ecstatic quality of the oriole's song that I have not infrequently mistaken one for the other. This somewhat lethargic finch has never paid any attention to the food and



The Brown Creeper Visits
Us in Winter
Only



Downy's Large Cousin the Hairy Woodpecker
Remains with Us All the Year and Finds
Plenty to Eat in Winter



The Black Capped Chickadee
Is a Permanent Guest
the Year Through

let of dangers successfully all the way to South America and back. His plumage is brighter than when he left in the autumn, as though his grayish-black coat had been thoroughly brushed. Last year his mate selected a high box elder at the foot of the yard in which to build their nest, and it came near being made of the family linen, for several times I observed him make a dive at some handkerchiefs which had been spread upon the lawn to dry. They proved too heavy for his wings, however, and some bits of rags and cotton batten were substituted, which he bore off in triumph. I am sure they would build there again did they know of the nesting material I have on hand for them. When nesting time arrives I shall exhibit my treasures and see if I can not persuade them to bring their nest to the materials.

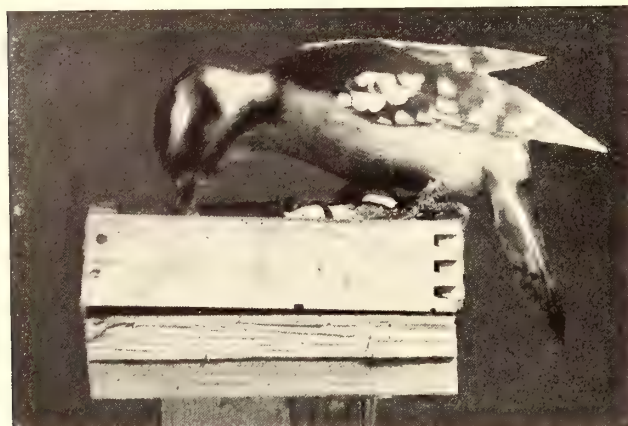
What a surprise and delight the first Baltimore oriole is! I was dressing before the mirror one morning with my back toward a window, when there flashed into the looking glass from the tree before the window the first oriole of the season. It was an old bird, for the body plumage was deep orange-red; and while I watched him in the mirror he regaled me with his choicest strain. The months of May and June, with all

water which I place for the other birds. He seems to have small powers of observation and to be fully absorbed in his own affairs. His mate never brings her nest into my yard like those of the oriole, robin, kingbird, bluejay, bluebird, and wren. I usually find it in a grove just out of the city, or in some wooded ravine, not quite near enough to be friendly, nor far enough away to be exposed to the dangers of the wild.

One week in May the worms of my box elder trees brought me a visitor that I can hardly reckon in my bird family. The bobolink, as all know, is a bird of the low meadows; but for three or four days one fed in my tree-tops and regaled me with the bubbling, rippling, gurgling, irrepressibly ecstatic strains that come from the throat of no other startling, and which carried me back to my barefooted days when these birds were so plentiful upon the yet unbroken meadows of Illinois.

No other member of my bird family is so erratic in his coming and going as the flicker. Only this morning I heard his loud scream from a half dead tree at the back fence. A downy woodpecker has been busy all morning excavating a nesting place in one of its branches, and I presume the flicker came to drive him away just for the amusement of it; and

what I heard was a shout of derisive laughter at the ease with which the feat was accomplished. The flicker seems to be something of a practical joker as well as a natural explorer. He sips water from the pan, looks into the bluebird's nest, samples the food at the dish, and then may not enter the yard again for a month. The only thing that brings him seems to be curiosity. I frequently see him, together with his mate, at



The Downy Woodpecker Is with Us Summer and Winter

an ant hill in my neighbor's yard. Sometimes they are joined by a third, and then the feast of ants seems to be one of great ceremony. If abundance of bowing is any criterion, the flickers are politest of birds.

I said that Downy was excavating a nesting hole in the half-dead tree at the foot of my yard. I hope the prophecy may prove true. He has been pecking away there for several days, and he works like one who is facing the stern realities of household cares—solemn like. His bigger cousin—the hairy woodpecker—fed ravenously at my table all winter, but when the first warm breath of spring came he was gone, and has not returned. His nest he will conceal from me in some lonely corner of the woods, and he will doubtless return for food next winter without bringing his young with him.

The white-breasted nuthatch leaves my table even earlier

than Hairy, and conceals his nesting place so well that it is perhaps less known than any other of our woodland birds.

For the brown creeper there is some excuse for an early departure from my hospitality: Besides being by natural disposition something of a recluse, his summer home is far to the north and he must leave in ample time. Yet, only the other day I saw the juncos feeding with the English sparrows near the woodpile, and these birds go north to nest. Each bird, however, goes after its own method; the creeper proceeds alone, and doubtless migrates slowly; while the juncos go in flocks, and doubtless by long night flights.

The bluejay I have with me always. There is not a month in the year that he does not enter the yard. He gobbles up my suet and nuts in winter; feeds from the scrap pail and drinks from the water pan in summer; tries to steal the eggs from the robin's nest in the silver maple; and takes his whole brood trooping across the premises in early autumn. If his mate can not find a better place she builds her nest in the tree that overhangs my walk, and expects me to guard her young from the neighborhood cats when, with short tails and inadequate wings, they come bumping upon the lawn from the nest.

For real companionship the black-capped chickadees are my favorites. They seem to appreciate every billful that you provide for them; they do not scamper off as soon as spring arrives, but return occasionally, not for food, but out of sheer friendliness. They do not leave one until household duties actually compel them to woods or orchards. In the autumn they bring their young to show how kindly the season has dealt with them; and the more they bring the more you are pleased.

When the house wren arrives, business in the bird world seems to begin in earnest. Of course, it has been going on all the time, but hardly with the proper eclat. Upon the wren's arrival, steam seems to be turned on; the buzz of wheels seems to be heard; things move. Without my pair of wrens, I should certainly think that summer affairs in my back yard lacked superintendence and push. I seem to feel relieved when they come; and when they depart, an added responsibility seems to rest upon my shoulders.

Sewage Disposal for the House

By Ralph Ernest Blake



HE sanitation of the house is not complete without a proper and efficient sewage disposal. In cities and towns where there are public sewers this is a problem that offers no difficulties to the house owner, as the single requirement is safe and proper connection with the sewer. In country districts the sewage question has a personal application and interest that makes it one of the most important matters relating to the house.

Sewage disposal presents two problems; first, immediate disposal, and, second, ultimate disposal. Immediate disposal is accomplished in two ways, by the dry method, which is without the use of water; and by water carriage. The dry method is the most primitive of all forms of sewage disposal and has little sanitary value. It entails the use of cesspools and vaults, of the pail system and the physico-chemical system. Within most municipal limits the cesspool is required to be water tight and must be frequently emptied. Outside city limits porous cesspools may be used if the soil is porous and it can be arranged some distance from the house and wells; in such cases the waste water escapes to the soil and the cesspool may be used a long time before being emptied and cleaned. The pail system calls for the use of water and gas tight

stone or metal pails, which are hermetically sealed and emptied. In the physico-chemical system various substances, as ashes, dry earth, charcoal, carbolated sand, etc., are used as deodorizers and disinfectors.

The water carriage system is the most modern and the most used system of sewage disposal. It involves the construction of a pipe system from the house, and passing through the streets to the point of final disposal. Two systems are in general use, the combined, in which the household wastes and the waste rain and other uncontaminated waters are carried off in a single system of pipes and sewers; and the two pipe system, in which separate pipes and sewers are provided for the two classes of waste. The pipe that conducts the waste from the house to the sewer is called the house sewer, and the pipes in the street the street sewer. The combined system is the one most used in cities.

Various methods for the final disposal of sewage are in use, some of distinct hygienic value and some positively unsanitary and wasteful. The easiest method is to empty the sewage into the sea or running water. The unsanitary value of this method near large towns and on potable waters is so obvious as to call for no comment. Tides cause frequent backflow and overflow when the sewage is discharged directly into the sea. This may be remedied by providing tidal flap valves,

Concluded on page 155

The Border of Hardy Plants

By Eben E. Rexford



THE most satisfactory garden of flowering plants for small places is one composed of herbaceous perennials and biennials. This for several very good reasons: First, once thoroughly established they are good for an indefinite term; second, it is not necessary to "make garden" annually where they are used; third, they require less care than any other class of plants; fourth, requiring less care than other plants, they are admirably adapted to the needs of women who can devote only a limited amount of time to gardening; fifth, they include some of the most beautiful plants it is possible to grow.

I have no disposition to say disparaging things about the garden of annuals. Annuals are, many of them at least, very desirable. But they call for a great deal of labor. It is hard work to spade the ground, and make the beds, and sow the seed, and keep the weeds down. This work must be done year after year. But with hardy plants this is not the case. Considerable labor will be called for the first year in preparing the ground and setting out the plants, but after that most of the work among them can be done with the hoe, and it will take so little time to do it that you will wonder how you ever came to think annuals the proper thing for the flower garden of busy people.

In preparing the ground for the reception of these plants, spade it up to the depth of a foot and a half, and work into it a liberal amount of good manure. Most perennials will do fairly well in a soil of only moderate richness, but they can not do themselves justice in it. To secure the best results from them, you must feed them well from the start. Give them a good send-off, and keep them up to a high standard of vitality, and they will surprise you with the profusion and the beauty of their bloom.

Perennials, as a rule, will not bloom until the second year from seed. Therefore if you

want flowers the first season, it will be necessary to purchase last year's seedlings from the florist.

In most neighborhoods one can secure material enough to stock the border from one's friends. But if you want plants of any particular color, or a certain variety, you will do well to give a dealer your order. In most gardens five or six years old the original varieties will have died out, or so deteriorated that the stock you obtain there will be inferior in most respects, therefore not at all satisfactory to one who wants "the best." That is what the florist will send you, if you patronize one who has established a reputation for honesty.

The impression prevails, to a great extent, that perennials bloom only for a short time in the early part of the season. This is all a mistake; you can have flowers all through the season from this class of plants, if you select your stock with a view to the prolongation of the flowering period. Many kinds bloom long before the earliest annuals are ready to begin the work of the season. Others are in their prime in mid-summer, and the later ones will give flowers until frost

comes. The fact is, perennials will keep the garden gay with bloom throughout the entire season, if you understand their habits and make a wise selection. If you want to know all about their time of flowering, read the catalogues of the dealers carefully.

On the ordinary home-lot there is not much choice allowed as to the location of the border. It must go to the sides of the lot, if it starts in front of the house, or it may be placed at the rear of the dwelling. On most grounds it will, after a little, occupy both of these positions, for it will outgrow its early limitations in a few years. You will be constantly adding to it, and the border that begins on each side will speedily overflow to the rear. Do not put it immediately in front of the dwelling. Leave the lawn unbroken there. While there is not much



Edge of Lawn



Hollyhocks

opportunity for "effect" on small grounds, a departure from straight lines can always be made, and formality and primness avoided to a considerable degree. Let the boundary curve, as shown in the first photograph, and the result will be a hundredfold more pleasing than it would if it were a straight line. By planting low-growing kinds in the front row, and using taller varieties next to them, with the tallest one in the rear, the effect of a bank of flowers and foliage can be secured. This the illustration also shows clearly. Shrubbery can be used in connection with perennials with fine results, if bold and striking effects are desired. This, as the reader will notice, was done on the grounds from which the picture was taken. Here we have a combination which can not fail to afford pleasure to the lover of the picturesque. It shows us a border which seems to have planned itself, so unstudied and informal is it—quite like the evolution of one of Nature's fence-corner bits of gardening.

For the background we have several most magnificent plants. The delphinium grows to a height of six and eight feet, in rich soil, sending up a score or more of stout stalks from each strong clump of roots. Two feet or more of the upper part of these stalks will be covered with flowers of the richest blue known in the floral world.

"Golden glow" rudbeckia is quite as strong a grower as the delphinium. It is a more prolific bloomer. Its flowers are of the richest golden-yellow, resembling the decorative type of dahlia. This plant is excellent in the rear, but nowhere else.

Hollyhocks deserve a place in every border. Their stately habit, their profusion of bloom, their wonderful range and richness of color, make them favorites everywhere. The illustration shows how charmingly effective they are when grown in clumps or masses. If their flowers are picked off as soon as they fade, and seed is prevented from developing, the plants will bloom throughout the entire season. In the illustration only single kinds are shown. The double kinds are showier, because their flowers are so thickly set along the stalk that a stronger color effect is given, but they are really no finer than the single sorts, for in the latter the rich and peculiar markings of the individual flowers show to much better advantage than among

the double kinds, whose multiplicity of petals hides this very pleasing variegation.

Coreopsis lanceolata, rich yellow, is a charming plant for front rows, especially if placed where it will have a white flower for contrast.

Phlox, all things considered, deserves a place near the head of the list. It is so hardy, so sturdy, so floriferous, so rich in color, and blooms during so long a season, that it comes very near to being the ideal plant for the border. It varies greatly in habit of growth. Some varieties attain a height of five feet or more. Others are low growers—almost dwarfs, in fact—therefore well adapted for places in the front row. Some varieties have lilac and mauve flowers, very delicate and dainty in coloring, but so out of harmony with the rose and carmine and violet kinds that they spoil everything if grown near them. But give them a place by themselves, with white

varieties to afford color contrast, and serve as a foil to their peculiar beauty, and the chances are that you will think them the loveliest of the lot. No other perennial can give such solid masses of color.

Peonies are superb flowers. They are to the border what the rose is to the shrubbery. Hardy, wonderfully prolific of bloom, rich and varied in color, delightfully fragrant, and coming early in the season—what more in the way of argument need be said in their favor? Give them a rather heavy soil, and let it be very rich. Disturb their roots as little as possible. Keep the grass away from them. They will require no other care.

For an edging plant, I know of nothing finer than phlox *sublata*. It forms a thick, low, cushiony mass of pretty green foliage, which its white and rose-colored flowers will almost completely hide after a little. Its decorative qualities and possibilities are very pronounced and always charming.

Dicentra, better known as "Bleeding Heart," is a most lovely early bloomer. Its long, gracefully arching sprays of pink and white pendant flowers are exceedingly attractive.



A Group of Iris

Aquilegias, white, red, blue, and yellow ought to have a place in every collection. They are early bloomers. They should be grown in masses, near the front row.

Iris is to the garden what the orchid is to the greenhouse. Its colors are of the richest—blue, purple, violet, yellow, white, and gray. In many varieties two or more of these colors are so combined as to produce most striking results. We have no more magnificent flower in the perennial list.

Pyrethrum uliginosum is a full bloomer. Its common name of "Giant Daisy" gives a good description of it. Excellent for back rows.

The herbaceous spiræas are most charming plants. Alba, white, and rosea, pink, produce great feathery tufts of bloom on stalks six or seven feet tall. They are exceedingly graceful, in an airy, cloud-like way, and never fail to attract the attention of those who would pass by an ordinary flower without seeing it.

The florists have taken our native asters in hand, and we now have several varieties that make themselves perfectly at home in the border. Some of them grow to a height of eight feet; others are low growers. The rosy-violet sorts are indescribably lovely. They bloom late in the season. Their long branches will be a mass of flowers with fringed petals and yellow center. The soft, pale blue varieties are exquisite in coloring. They bring the charm of Indian summer into the garden, and hold it prisoner for several weeks. By all means have a few roots of this most delightful plant put into your border this spring.

In setting out your plants allow for development. Don't crowd them. Don't try to have a little of everything. Don't



Creeping Phlox

overlook old-fashioned kinds because they happen to be old kinds. That proves that they have merit, or they would have been dropped from the list long ago.

Keep the ground between them clean and open. In spring manure them well, working whatever fertilizer you make use of into the soil about them. Stir the soil occasionally during the season. Keep them from producing seed, as far as possible, for that exhausts their vitality more than anything else.

Once in three or four years divide old clumps. Break their roots apart, and discard all but the strongest, healthiest portions of them. Reset these in rich, mellow soil, in spring or in fall, after the work of the season is over, and the plants are at a standstill.

Sewage Disposal for the House

Continued from page 152

which permit the outflow of sewage and prevent the inflow of water; by discharging the sewage intermittently and only during low tide, and by providing constant outflow by steam power pressure.

Another simple way of disposal of sewage is to burn it. The water waste is permitted to drain off and the solid residues are destroyed in suitable crematories. Sewage is also disposed of by precipitation, in which the liquid is drained off and the solids used for commercial purposes. This precipitation is done by natural process or by chemical means.

In soil filtration the sewage is purified and oxidized by being passed through a porous soil. The filtration should be intermittent and the soil porous and well drained to accomplish good results. Sewage is also utilized for land irrigation, the organic and other useful parts being used for fertilizing purposes.

Subsurface irrigation is sometimes used by small towns and is available for isolated dwellings if ample land is available. In this system pipes with open joints are run through the grounds, and the sewage allowed to percolate through the soil. A flushing tank, to carry the sewage to all parts of the system, is necessary in this method.

The Cameron septic tank system is one of the most modern and most effective methods of sewage disposal. This, says Dr. Bergey, is a complicated system which utilizes the dissolving and liquefying system of anarrobic species of bacteria in one portion, the so-called septic tank, and the oxidizing

action of aerobic species of bacteria in another portion, the filter beds, several of which are arranged in series. The system, in brief, consists of discharging the sewage into settling basins, and thence transferring it into the septic tank. In some works this is closed; in others it is open. The solid matter having undergone solution and liquefaction in the septic tank is discharged into the first of the first series of filters, where the anarrobic and aerobic bacteria perform their task of breaking down the intermediate dissolved bacteria. The filters operate automatically, one after the other. The oxidation process is completed in a secondary series of filters, which, however, are omitted in some works. The filters are made of clinkers and coke. The pathogenic bacteria do not appear to be removed by this process, and further filtration by means of a sand filter has been suggested as a final step in the process.

Another method of sewage disposal by bacteria is known as the bacteria or contact bed system. In this, says Dr. Bergey, the sewage is treated in an open tank containing a bed of coke, cinders and clay to a depth of one to two meters. On the floor of the tank are open-jointed collecting pipes. The contact beds are usually operated in pairs, the first or primary bed acting on the sewage for several hours and then discharging its contents on to the second bed by gravity, where the sewage is treated for the same length of time. The action is intermittent. The system has been tried to some extent in England.

Copper and Brass Repoussé Work

By Mabel Tuke Priestman



THE artistic work of hammering on brass and copper has a charm. The quick response to the blows of the mallet, the play of color on the metal, and the many uses for which it can be employed, make it one of the most interesting forms of handicraft. The craftsman must naturally possess a knowledge of drawing before he can design to suit the requirements of metal.

Copper is especially attractive on account of its unusual advantages. It assumes the most beautiful colors. At the same time it is malleable, durable and inexpensive. In the actual technique of repoussé work there is not much to learn. The word repoussé signifies "pushed back," and is usually applied to ornament raised out of sheet metal.

The repoussé work is done with hammers, nails, and punches, or even a poker. The following list would be found useful to one who is going to take up the work seriously: A chasing-hammer, a second hammer (heavier in weight), several beaters or tracers (these have rounded, flat, or oval heads, and are useful for making dents in the metal), a pick, a wooden mallet, a spatula or metallic spreader, a pair of compasses, a bed (to hold the work), a wooden bench, a stone slab (one inch thick), a chaser's bowl, a frying-pan or pitch-pan, and a file.

The tool is held upright in working, and the top is struck with a hammer to make a depression in the metal, which is placed face downward on a yielding surface.

A bowl, one of the easiest forms, is usually the first attempt of the amateur. For a bowl seven inches in diameter, procure a "nineteen-gauge" sheet of copper. On it draw

ness at the edge with a file. The bed on which the metal is worked may be either of wood or pitch. A wooden bowl is sometimes utilized for hammering on bowls of the same



Bottle in Brass Repoussé

size. For bowls or cups wood has many advantages. I would therefore suggest that a piece of hardwood four or five inches square should have a circular depression one-half inch deep, and three inches wide.

After having rigidly clamped the block in the vise, place the copper on it, and begin to hammer it an inch from the edge, over the hollow, hammering in circles, until the last circle is reached. The blows must be struck evenly, so that the surface is uniform. Too hard a blow will obviously make too deep a depression. Continue this until the bowl begins to grow. Any uneven places may be removed by placing the bowl on a hard, flat surface, and hammering gently until it is smooth. The size of the bottom of the bowl can be determined according to the choice of the worker, but this must be perfectly flat and even.

Casserole-covers are made in the same way as a bowl. For the flange of the lid the edges are turned over sharply, so as to fit the casserole. Care must be taken to make the cover fit the rim of the dish. The rim is hammered very carefully while it is held in the vise. When the repoussé work is finished the object is not yet complete, as it now needs to be colored.

After removing all dust it can be immersed in a solution of sulphuric acid and water. Two tablespoonfuls of sulphuric acid to one gallon of water is a sufficiently strong solution. After immersing the work in this for a few minutes, it must be washed in cold water and dried. If a bright polish is preferred, it can be polished with emery-paper, and finally polishing-paper.

Another way of coloring the metal is by the application of heat. After a thorough cleansing, it must be rubbed with oil, and placed in a slow oven, until good color appears. There are many ways of coloring metals with acids, and much individuality can be given to the work by experiment-



Drinking Cup. In this Open-mouthed Type the Design is Beaten out from the Interior and Finished on the Outer Face

a circle three inches in diameter. Then make two smaller concentric circles. Cut with a pair of shears a piece of copper a little outside the largest circle, removing any rough-

ing in this direction. The relief should be kept well polished, but the effect of a darkened background gives an antique and interesting appearance to the work. The background may be darkened by rubbing paint or sulphate of ammonia into its small dots and lines.

If the craftsman wishes to make a brooch or buckle, it would be best to use a thick sheet of lead for the bed, as this

tallow. Some workers add a little plaster of Paris to secure strength.

The bed is made by pouring the pitch while soft on a stone slab, or a piece of earthenware, which should be first wet with water to prevent the pitch from sticking. The cement should be about one inch in depth. High relief, however, would require a thicker bed. The metal must be made to



Students at Work. The Girl with the Hammer is Working on a Sheet of Brass Screwed on a Flat Piece of Wood

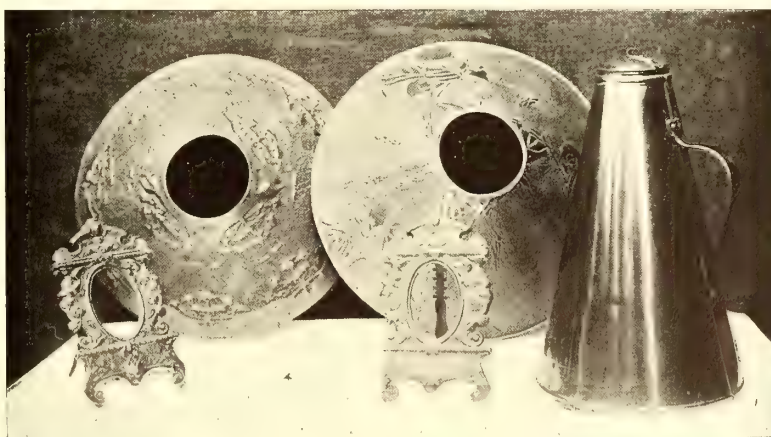


Copper Plaques and Panels of Varied Shapes and Eminently Decorative, Displaying Great Artistic Ability

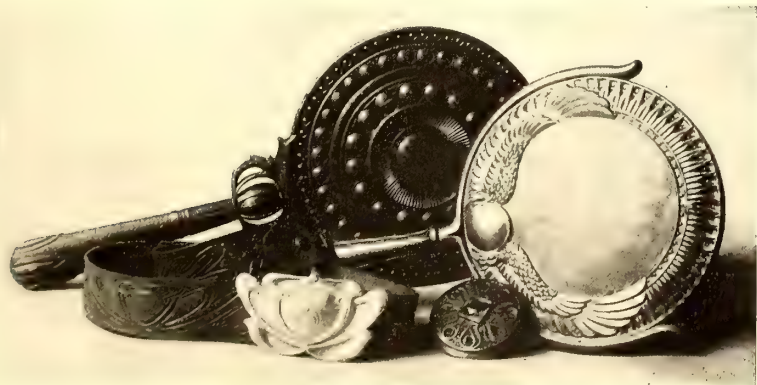
yields very slightly, and brings out the ornament. If a bold relief is required, a much softer bed will be needed. Many workers find that a bed of pitch is the best for this purpose, and for other kinds of repoussé work as well. The pitch in itself would be too hard and brittle, but when combined with grease, or fat, becomes plastic. The pitch may be softened by the addition of tallow candles. The proportion of tallow will vary with the season of the year. In the summer-time seven times as much pitch will be required as tallow, while in the winter time twice as much fat will be required as in summer.

In making the pitch or "cement," as it is named, an old pan is used in which the pitch is melted, adding a portion only of the tallow. When cool, test by pressing the finger on it, until it yields slightly to the pressure. Then try the hammer on it. If it cracks or chips, remelt and add more

adhere to the cement face downward; it must be first warmed, in order that the pitch may adhere firmly to the metal. This needs a little manipulation and patience. When the work is finished and has to be taken off, the metal must be quickly warmed all over with a blowpipe or a hot coal. Sometimes the pitch sticks very persistently. To prevent this flour should be dusted over the pitch before the metal is put on.



Hot Water Jug Made of Copper Lined with China for Carrying Hot Water to the Bedroom. Brass and Copper Lamp-shades Showing Realistic and Conventional Designs



The Work of Philadelphia Students

Another practical way of making cement is to use one-half of pitch and one-half of brick-dust. The latter may be mixed with plaster if desired. This may be tempered with a little linseed oil and rosin. Prepared cement is sold in casks by dealers in tools, and sheet-metal, which saves the trouble

of heating and mixing.

Copper, brass, red metal, tin and pewter, are all sold in sheets for repoussé work. The sheets of brass are from six to twelve inches in size, and can be had in all thicknesses from that of note paper up to half an inch. Number twenty-five is best suited for beginners, as it can be cut with the shears. Select metal which is free from spots, holes or scales. Brass can be smoothed out for work with a common flat-iron. The surface is then rubbed with fine sand-paper, or with pumice-stone, or emery-paper. It must then be screwed to the board or applied to the pitch.

The patterns must first be drawn on thin, strong paper, with a very black, soft lead-pencil. Lay this face downward on the brass. It may be held in place by gumming the edges to the metal. Now rub the back with a paper-knife, flat-iron, or agate burnisher, and the pattern will be transferred. It will be safer to go over it again with pencil or ink.

Another means of transferring the design, is to lay a sheet of carbon paper on the brass, and over this the design, going over the lines with a knitting-needle or any instrument with a blunt point. A dressmaker's prick-wheel is sometimes used. After the pattern is laid on the brass, go over it with the prick-wheel, which will leave lines of

for lamps: objects readily available for creation in this work.

With the development of electric lighting, decorative bands and circles could be evolved for clusters of electric lights, and these may then be done with the combination of metals.

Take, for instance, a circle twenty-four inches in diameter, one-eighth of an inch thick, and two inches wide. This could be made of lead with eight hammered bow-shaped excrescences, through each of which a hole must be drilled. The electric wire can be drawn through the holes. This could be attached to the ceiling for a center ornament for electricity. A small inverted bowl of copper with a well-designed decoration could then be placed in the center of the pewter circle, and should contain at the bottom a large hole, through which eight or ten electric wires could pass.



Metal-work Exhibited at an Arts and Crafts Exhibition



Copper and Oak Fire-screen

small dots in the metal. These must be remarked with pencil or ink. Having applied your pattern successfully to the metal, it must next be outlined with the tracer, which must be done with great care and accuracy. Then a pick must be used for making a series of in-



Goblet in Brass Repoussé. The Vessel is Made of One Sheet of Brass, Only the Handles Being Riveted in Place



A Well-designed Bowl

A broad band some four or five inches deep could then be made of copper with repoussé work in high relief. This should be the same size as the pewter circle, and should be suspended about three feet below. The wires hanging straight from the pewter circle would be threaded through receptacles placed for the purpose, and hanging down ready for the

dentations in the background. All kinds of lines can be executed with mats and tracers, according to the requirements of the design.

In this craft more than any other, the individuality of the worker can be felt. At recent Arts and Crafts exhibitions bowls, casseroles, trays, panels, book-racks, buckles, and receptacles for logs, seemed to be mostly in evidence, but the wider field for materials suitable for illuminating the home seems to have been entirely overlooked, with the exception of bowls and shades

bulbs, which could be of frosted glass rather than clear glass. The group of wires hanging from the center bowl would also be attached to the circle, and would hang so as to come just below the copper band. Such a center ornament would bring a large price, and yet would be extremely easy to make.

Sconces in the form of plaques would also be suitable for candles or for electric-light receivers. Artistic and simple lanterns can be made of glass, with metal-work frames. The latter should be of brass or copper, and many are the devices which could be made use of for extinguisher-tops and spherical crowns suggested for such lanterns. Antique cypriote glass, or Tiffany glass in yellows, blues, and sea-greens, giving an iridescent effect, could be used in connection with brass or copper supports, and would be adaptable either for electricity or gas. These could be used singly in a hall or hanging from brackets in a sitting-room from the side-walls, and would give a unique appearance to any room in which they form parts of the decoration.

Lamp-shades can also be made of sheet or metal, the background being pierced to diffuse the light. These are quickly and easily made, as they are hammered on the flat and not curved until ready for the finishing touches.

Door-plates and a small panel to go around the electric button add a distinctive feature to a front door, and are a mode of decoration which has also been overlooked.

A copper mantelpiece exhibited at an Arts and Crafts Exhibition, could be used to hide a modern atrocity. The play of color from deep purple to pale pink on the copper



In Making this Type of Ware Specially Contrived Gauges Are Fitted Into the Object and the Design Worked-up on the External Face

mantelpiece designed and executed in Busck Studios of New York, showed what effective results can be obtained through coloring by the action of heat.

In this craft especial attention must be given to making the design restrained, so as to emphasize the parts that stand out in relief, thereby forming a contrast between repoussé and background.

Were it necessary to argue for making repoussé work in copper or brass it would be easy to point out some of the results accomplished by it. It is charming work to do, with all the charm of original and creative work. One must, of course, be interested in it or one will not succeed in it any more than one would make a success of anything else in which one was not interested. But I can not imagine any one taking up repoussé work without, almost at once, developing the keenest interest in its mechanical processes and in the results accomplished by the simple tools required for it.

And, then, while one is thus engaged, one is creating a work both of beauty and of utility. A vase or a plaque has use, even if it be but to stand on a shelf or hang on the wall; for every object of beauty within the house has its own message of pleasure to tell to those who do no more than look at it. Of the strictly utilitarian work in copper and

brass—objects of use that may be made in these materials—sufficient has already been said. The useful adaptations are almost without end, and here again fresh notes of beauty are given to the house, and fresh satisfaction comes to the worker for what has personally been accomplished. However, it is a work that speaks for itself.

The School and the Children in Civic Betterment



THE value of missionary effort among children has long been recognized by those engaged in civic betterment. The child is not only benefitted, but the parent is often reached. This discloses the value of the child in the campaign for civic betterment. The child is reached through the school, and both school and child form, therefore, a force to be considered and one of marked value.

The limits by which the school and the child are circumscribed in civic betterment are sufficiently obvious. It must be kept within personal bounds. The child is not concerned with the larger problems of municipal art—but it may learn to keep itself neat; it may learn to appreciate the cheering effect of a growing plant or flower; if the school building is standing in well made grounds, the lesson of outward beauty about it will not be lost. These are ideas the child will take home. Some effort at home betterment may follow—not necessarily, but the chances are well worth taking.

Much patience is needed for this kind of work. Children resent reformation even more bitterly than the average politician. The work must be done with great caution and ex-

treme care. Yet rightly done it will yield results. There is ample evidence on this point. Even in New York's East Side, which is the typical overcrowded spot of America, children have learned some of the first lessons of home improvement and carried these lessons home, where they have led to unexpected results. They have learned—some of them—some of the merits of clean streets; they have learned that there is a public cleanliness and a private cleanliness that must be heeded in every large city; they have learned that some school buildings are better to look upon and better to go to school in—the first lesson in architectural appreciation—than others; they have learned how rooms and halls may be brightened with flowers and foliage; they have learned the merits of healthy games played on public playgrounds; they have, in some cases, awakened to the fact that a little more order at home would improve things, although they may know neither the way nor the wherefore. All these are matters completely within the scope of civic embellishment; they are matters that affect the child, his parents and his home life; it seems reasonable to hope that these early lessons will give more notable results in later years that will amply compensate for the original effort.

Using the Kitchen

By Sarah Adams Kellar



NO MATTER how completely a kitchen may be equipped there must be knowledge of how to use the permanent fixtures and the utensils with which it is supplied or it will be utterly useless and a matter of constant expense and annoyance. Hence the trained cook and housewife, each of whom is supposed to be more or less familiar with the tasks that must be performed here. It is not the province of these papers to present directions for kitchen management, but no series of papers on the kitchen would approach completeness which ignored this aspect of the subject.

Every housekeeper should have a certain familiarity with the more ordinary sort of kitchen work. The young woman particularly whose acquaintance with a kitchen is first made in her own house when she sets up housekeeping is at so serious a disadvantage that years may be necessary to overcome this difficulty. Expert knowledge of cookery and of housework cannot be expected of all women, but no one should begin housekeeping without some preliminary experience. Even if this is but slight it will help very much in bridging vacancies in domestic service and in meeting unexpected contingencies which are sure to arise from time to time, and which will certainly come to the surface at the most unexpected and inconvenient periods.

There are several ways in which this preliminary training can be acquired. Home training is the most accessible and because the opportunities it affords for practical work are so abundant and convenient it has merits of a very pronounced character. Cooking schools offer more elaborate opportunities, because they are planned and conducted on a broader scale, and the novice will gain in them knowledge and experience which she may never acquire in the best kept home. The advantages offered by courses in these schools are very great and should be availed of whenever possible.

Still another source of information is supplied by the cook books. The practical merits of a good cook book are of the highest value. There are many such books to be had, and many of them are very able and excellent indeed. One or two cook books should be in every kitchen. Too many are apt to be confusing, but a shelf should always be provided for these volumes and it will be strange indeed if they do not constitute one of the most valuable features of the kitchen equipment.

If one has a prejudice against cook books one will do well to get rid of it at once. A good cook knows, of course, how to prepare many dishes without recourse to printed directions; but the seeking of such authority should not be regarded as detrimental to the cook's status. Good cooks are scarce; very good cooks are too high priced for the average pocket book; a cook book is by no means a substitute for a good cook, but it is a very great help, and in these difficult days of domestic servants everything that helps in the kitchen work is to be welcomed with a glad hand.

The recipes given in any cook book fall naturally into two classes; easy and difficult. The beginner will do well to avoid the latter, for delightful as the results promise to be—and are, when successful—the work involved often seems discouraging. The elements should be mastered first, and when success has been achieved with them it will be time enough to think of moving on further. The simple recipes are numerous enough for all ordinary purposes, for the most common

foods are prepared simply enough, and those who have mastered the easiest of them will not want for variety and interest in their table furnishings.

There is one general rule that should be followed in using cook books in every instance, and that is to do exactly as the directions say, using the quantities given in exact measure, mixing the ingredients in the order indicated, arranging the cooking vessels precisely as stated, and in every way following the given order literally. One must assume that all the recipes in a given book have been tried again and again by the author who puts them forth. It must be assumed, therefore, that the printed directions give precisely the way to prepare the dish and any variation from them will give different results and lead to well-merited disappointment. The directions are intended to be followed literally and a particular dish should not be undertaken unless this is done.

Even with the utmost care the beginner may meet with failure. The lesson taught by this experience is simply that of more care. But one should not be discouraged because a desired result is not obtained the first time. You may not get it at first, be you as careful as you may, but you will have better luck the second time, and may have complete success the third. So many experiments may not always be necessary, but one should not condemn a cook book or a certain recipe because it was not a success at first trial.

A kitchen scrap book should be placed in every kitchen, and in it the mistress should place every recipe that has been found successful or which appeals to her in any way. Recipes from the family cook books should be copied out and kept together in this book, as this will facilitate reference and, in a measure, separate the wheat from the chaff. It will add very much to the ease with which such a book is consulted if the contents is typewritten. In copying recipes the utmost care should be taken to see that the ingredients and their quantities are accurately given, for mistakes are frequently made in copying and too much care cannot be exercised.

For the "latest things" in kitchen work and recipes there is a goodly list of special periodicals, from which much of value and of interest may be gained, but which will be found chiefly of interest to the mistress. The servant cannot be expected to cull these papers systematically; but the interested housekeeper, bent on keeping her house in the latest way, intent on knowing the latest and best way of doing things, will find them of great help and assistance.

The daily press, not to be behind hand in the noble work of bettering the kitchen, prints daily or weekly installments of contributions to kitchen lore which the inquisitive may consult for such guidance as she hopes to find there. Signed recipes and suggestions by competent persons are always valuable, and the best of these should find their way into the kitchen scrap book. The scope of that book, by the way, should not be limited to immediate needs, but should include anything and everything which may seem to be of future value.

There are few things more important in the kitchen than for the mistress to have entire control. If one can employ a corps of servants this is not needed because in that event there are always others to do work which the mistress would not undertake under any circumstances. But in families of moderate means the mistress must be mistress literally. She can turn her kitchen over to her servants and rest content with results, but she should never be compelled to appeal to them for ordinary information.

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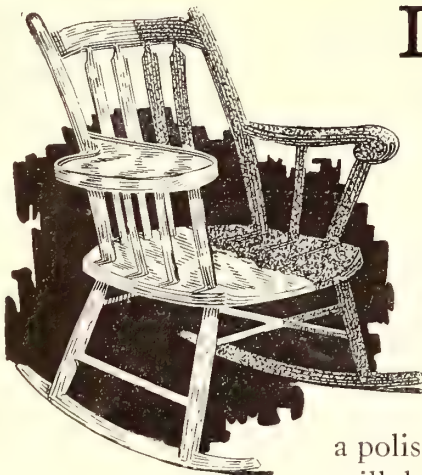


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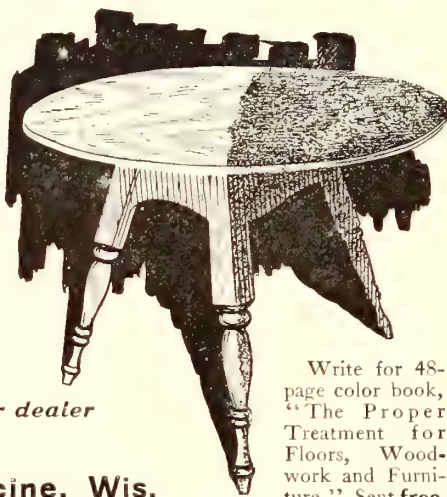
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THIS is the busy month of the season. As soon as the ground becomes dry enough to work to advantage, spade it up. Throw it up in clods without attempting to pulverize it. This can not be done successfully, until air and sunshine have had a chance to do their work upon it. After being exposed for a few days to the action of the elements it will be in a condition to disintegrate readily. Then—and not till then—work it over and over with the hoe and spade until it is mellow and fine.

Add to it, as you pulverize it, whatever fertilizer you decide on using. Incorporate this thoroughly with the soil.

If barnyard manure is not obtainable, most of the commercial fertilizers can be substituted to good advantage. Before deciding on any kind, it would be advisable to consult some practical farmer or gardener, or dealer in fertilizers, and get his opinion of what is best adapted to the soil in your locality. Soils vary greatly, and what may answer perfectly in one place may not be what is needed ten or fifteen miles away.

Plowing can not be done to advantage in small pieces of ground, such as comprise the average garden. Of course plowing does away with considerable hard labor on the part of the gardener, and it expedites matters considerably, but results are quite as good where the spade is used, if it is used thoroughly. The soil must be turned up to the depth of a foot at least. One argument in favor of the use of the plow is, that all the soil in the garden will be turned over by it, while if spading is depended on, a good deal of that between the rows will be skipped. This ought not to be, for while plants in rows do not grow in the unspaded soil, they should receive a good deal of benefit from it, and this they can not do unless it is thoroughly stirred and kept free from weeds. It is an excellent plan to have the garden plowed every other year, if it can be done. The use of the garden cultivator in the paths, during the season, will keep the soil open to the admission of air, and moisture, and prevent the growth of weeds.

The garden cultivator, which is the tool of the garden, par excellence, can not be used to advantage unless vegetables are grown in rows, because of the many turns that must be made when one attempts to use it in beds. If the rows run lengthwise of the garden, but few turns will have to be made. You will go up one side of a row, and back on the other, and there will be very little waste of time or labor, but in cultivating the short rows running across a bed more time and work will be expended on the turns you have to make than on the bed itself, and it will be impossible to do as good work, or make the garden look well.

Seed-sowing is not the careless, rapid work that many amateur gardeners seem to think it. Neither is it the difficult, complicated work that one often gets an idea of its being after reading some of the elaborate advice of fussy gardeners. When your soil is in proper condition, work out the rows plainly before anything else is done. Get them straight by the use of a line. Then run a stick with a rather blunt point along the row, being careful to just stir the surface of the soil enough to enable you to easily follow the row after the line is removed. It is not necessary to make a depression in the soil for the reception of seed of ordinary vegetables, as some seem to think. Scatter the seed evenly. Sow thickly enough to make sure of sufficient plants all along the row. If there are too many, surplus ones can easily be pulled out. It is better to have more than are needed than not enough, for that means

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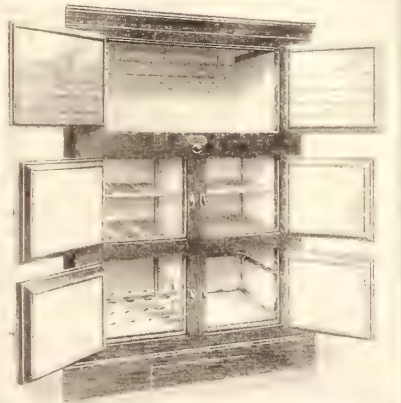
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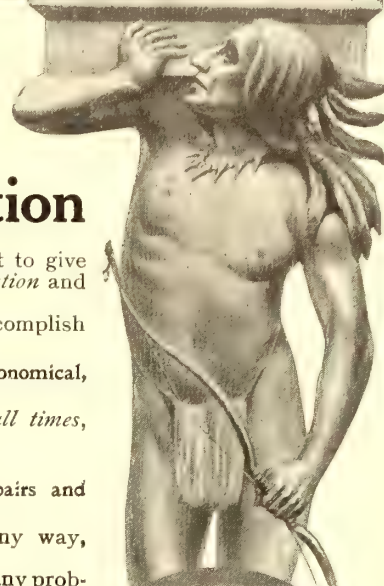
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- CHAPTER III. Gives the principles and importance of fertilization and the possibility of inoculating the soil by means of nitrogen-gathering bacteria.
- CHAPTER IV. Deals with the popular awakening to the importance of canals and good roads, and their relation to economy and social well-being.
- CHAPTER V. Tells of some new interests which promise a profit.
- CHAPTER VI. Gives a description of some new human creations in the plant world.
- CHAPTER VII. Deals with new varieties of grain, root and fruit, and the principles upon which these modifications are effected and the possibilities which they indicate.
- CHAPTER VIII. Describes improper methods in agricultural practice.
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filling out gaps by transplanting, which is unnecessary work if thick sowing is practiced. After scattering the seed, sift fine earth over it to the depth of about a quarter of an inch for seeds of ordinary size, and less for very fine seed. Then press it down well with a smooth board. This is easily and rapidly done by laying the board, which ought to be about six inches wide and six or eight feet long, lengthwise the row, and stamping on it. This will make the soil compact enough to retain all the moisture needed to insure germination.

If you have a garden cultivator with a seed-sowing attachment, or a garden drill, hand-sowing can be dispensed with wholly. Seed-sowers can be adjusted to fit seeds of all sizes, and an attachment for covering the seed can be adjusted to do this work satisfactorily, so that one trip along the row is all that is needed to complete the work.

Wherever possible have the rows run north and south. This gives the sun a chance to get at each side of them more evenly than where they run east and west.

Such plants as melons, cucumbers, and early squashes can not be transplanted as easily as most other vegetable seedlings. It is a good plan to put the seeds in blocks of turf, if you start them in the hotbed. These blocks can be removed to the cold frame without disturbing the plants growing in them, and later they can be placed in the garden without giving the seedlings any check. Cut the blocks of even size, so that they can be disposed of compactly in hotbed and cold frame.

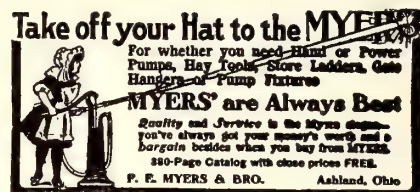
I am often asked what varieties of vegetables to grow. Desirable new varieties are constantly being introduced, but among the old stand-bys are several which have not been improved on for a good many years. They have held their own against all newcomers, and the chances are that they will continue to do so for a long time to come, for it is hard to see how some of them can be improved on. Here is a good list: Sweet corn, white cory for early crop, Stowell's evergreen for late asparagus, Conover's colossal beans, golden wax and stringless green pod. Beets, Egyptian blood turnip for early crop, long blood for later. Cabbage, Jersey Wakefield for early, Stone Mason for late. Carrot, Danver's orange, cauliflower, early snowball, and late Algiers. Celery, golden self-blanching, early, white plume and giant Pascal, late. Cucumber, white spine, lettuce, white cos, and cabbage, onions, Danver's yellow and white Portugal, or silver skin. Peas, early, Gradus and Thomas Sexton; late, champion of England. Radish, scarlet globe, white turnip, and French breakfast. Parsnip, hallow crown. Squash, early, bush crookneck, late, hubbard; tomato, imperial, early; trophy late.

Peas should be planted as early in the season as possible. To grow this most delicious vegetable well, it is very necessary that it should be given an early start, that it may develop its roots before hot weather comes. Late sown peas seldom amount to much, because hot weather prevents their forming strong roots without which the plants are unable to stand the ordeal of summer. The seed should be covered deeply, that the roots of the plants may form far enough below the surface to be reasonably sure of plenty of moisture at all times. Shallow-sown peas, with defective root-development, seldom produce half a crop. They will not do this unless the season is a most favorable one. It pays to plant early, and cover well, and give the vines of all climbing varieties a good support.

Pansies for early flowering must be started early in the season. Sow in the hotbed, and transplant the seedlings to coldframe or open ground as soon as they have made their second or third set of leaves. Or they can be sown in shallow boxes, and kept in them until the time



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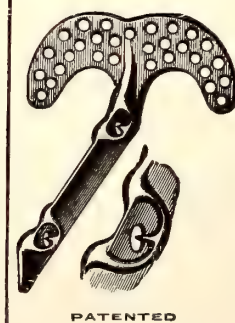
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comes when it is safe to put them out. Thin out, if too thick.

Tube roses should be given an early start if they are to complete their flowering in the open ground before frost. In planting the tubers, cut away the old roots which are found in a dry mass at their base. Do this with a thin-bladed sharp knife, and cut down to healthy tissue. Pot the tubers in a rich, sandy soil, and give them a warm place. Do not turn them over to the garden until the weather has become settled and warm, as this plant is very tender.

Tuberous begonias and gloxinias should be given attention now. Shake old plants out of the soil in which they grew last year, and spread them on moss, or an old blanket or piece of carpeting—almost anything that can be kept moist and warm, and leave them there until they sprout. Then pot in rich fibrous earth, allowing a six-inch pot for each tuber.

It used to be thought that we could not grow good dahlias at the north unless they were given an early start in the house. But I have satisfied myself that this is a mistake. I put my tubers where they will be moist and warm about the first of May. Very soon they will begin to sprout. By the time the weather is warm enough to warrant me in putting the plants into the ground, active growth will have begun. That is "eyes" or buds will have developed to the growing stage. Then I break the roots apart. One good, strong root makes a better plant than a whole bunch of tubers set out together. The soil in which they are planted must be worked deeply—a foot and a half at least—and made very rich. This starts the plants off promptly, and pushes them ahead rapidly, and the result with me is earlier and finer flowers, and a good many more of them than I ever got from starting the plants into growth in the house, very early in the season, because early started plants generally suffer from too much warmth and a dry atmosphere and become weak before they are planted out, and have to put in the first month of their life in the open in recuperating from the debilitating effects attendant on their first stage of growth. I believe the secret of successful dahlia culture consists in starting the plants off vigorously and keeping them going right ahead.

I never advise any one to attempt the growing of ordinary garden annuals from seed in boxes or pots in the house. If it were possible to regulate conditions so that healthy growth could be secured, one might succeed in growing good seedlings there. But the chances are all against it. The plants are so weak when put out in the ground that they receive a check from which they will be so long in recovering—if they do recover—that plants for seed sown in the open ground always get the start of them.

FLOORS

By Alexander Hooper

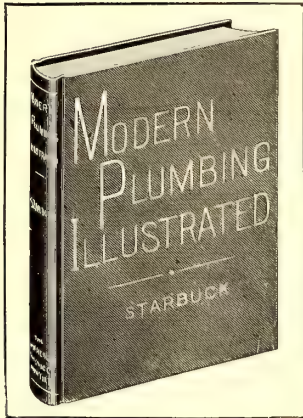
THERE is something to be said for and against every kind of floor, but there is more to be said in favor of the bare floor than against it. It is sanitary and easily kept clean; dust need not rise from it in clouds when it is swept; it does away with the hard part of the annual house cleaning and simplifies the question of the walls and furnishing because any color or combination of color will harmonize with the floor.

The most sanitary and beautiful floors are those of hardwood. Their costliness, however, make them impossible to many. The waxed floor is very clean and sanitary, but it is slippery and easily marred. A drop of clean water, if allowed to dry on it, will leave a stain. Next to the waxed comes the varnished

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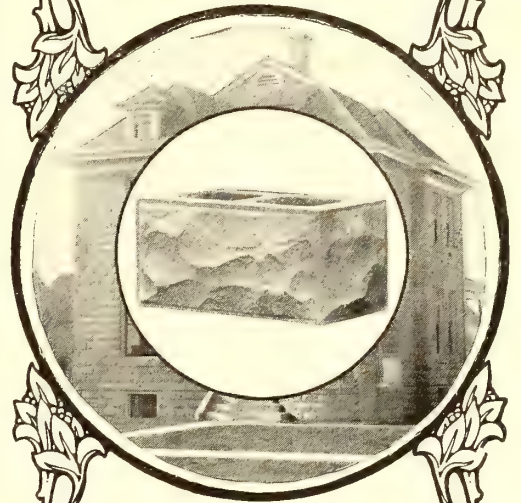
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floor. This is never quite so beautiful as the fine waxed surface, but it may be made nearly as fine looking by putting on several coats of varnish and rubbing down each coat as soon as it is dry. Following the varnished floor comes the oiled floor. This may be clean and beautiful if properly done. As a rule, oiled floors are not satisfactory, because they are carelessly oiled. The room should be perfectly clean before the oil is applied. This should be allowed to dry and then the boards should be rubbed hard with a clean woolen cloth. Use the best boiled linseed oil, and to each pint add one pint of turpentine. All of these finishes may be applied to the natural or the stained wood; or the floor may be painted any color and varnished.

The best way to treat a floor that has been subjected to various preparations until it has become dirty looking and sticky is to give it a thorough scraping. It is useless to try any new treatment until the natural wood is reached, and no amount of scrubbing will remove the hard, greasy crust formed by successive coats of oil and varnish. If it is not possible to obtain the regular scraper used by workers in wood, sheet tin can be cut in crescent form, using a common vegetable chopper as a model for shape and size. A small plane also answers the purpose. Both the scraper and plane are generally found in the tool-chests sold in toy shops. The worker should begin at the upper end of the room and follow the grain of the wood. As the layers of varnish and paint scrape off, the accumulation should be carefully swept up in order to keep the freshly exposed surface perfectly clean. Going over the floor with the glass and sandpaper used by cabinetmakers in renovating old furniture produces a fine polish and remove any streaks left by the scraper. After the floor has been smoothed with the sandpaper it may be varnished, painted, or stained, as may be desired. Shellac will give a pine or natural wood effect, and possesses the advantage of showing the dust very little. Two coats should be applied, the second after the first is thoroughly dry. When a darker shade is desired, oak, cherry, or mahogany stain may be used. When the second coat of stain is dry the floor may be varnished and waxed. The wax should be rubbed on with a piece of chamois skin and left to dry, especially after the first application, for fully two hours. Then the floor should be gone over with the brush and lastly the entire surface polished with chamois skin or heavy flannel cloths. To do all this properly requires the strength of a man. Of course, after the first treatment the work is not so difficult, and a floor can be kept in good condition by a weekly rubbing with the brush. It may be dusted daily and kept in good condition by going over the entire surface with an ordinary broom over which a large square of cheesecloth has been wrapped. Occasionally a large piece of cheesecloth moistened with kerosene may be used after all loose dust has been removed from the floor with a soft brush. A few general rules for staining woods will help anyone to get the effect he or she may desire. The wood to be stained should be clean, smooth, and dry. The stain should be tried on a piece of the same kind of wood as that on which it is to be used, because different kinds of woods absorb more or less of the coloring material, as the grain is open or close. The stain may be put on with a brush or with a cloth, preferably the latter, because the stain can be rubbed in with it. Measure the surface to be stained, then mix the amount of stain required for that amount of surface. Rub the stain in and let it dry perfectly. It should stand at least twenty-four hours and then be gone over with a woolen cloth wet in linseed oil, rubbing the oil in well. Let

this rest twenty-four hours, then rub with a dry woolen cloth; this gives a soft, satin finish.

If a waxed or varnished surface is desired, it should be put on after the polishing is done. In mixing colors remember that the coloring matter varies in strength, and that, no matter how closely one follows the rule, it is necessary to try the mixture before putting it on the surface to be stained.

If the stain is too dark add more turpentine and oil; if it is too light, add such colors as will give you the shade you want. A stain made with one quart of boiled linseed oil, three gills of turpentine, and the necessary coloring matter, will stain two hundred square feet, going over the surface once. If the wood to be stained is open-grained it will require a filler of whiting or starch. Half a pint of either will be sufficient for the amount of stain given above. To make a light oak stain, mix six tablespoonfuls of raw umber with the oil and turpentine. A dark oak stain may be made by adding a little lampblack to the light oak mixture; for a cherry stain add six tablespoonfuls of burnt sienna; for a light mahogany add four tablespoonfuls of burnt sienna, one tablespoonful of chrome yellow, one tablespoonful of Bismarck brown, oil, and turpentine; for a dark mahogany, six tablespoonfuls of burnt sienna, one of chrome yellow, one of Bismarck brown, half a teaspoonful of aniline black, oil and turpentine. A combination of burnt umber, burnt sienna, chrome yellow, and Venetian red gives a pleasing warm dark color. Instead of using the powdered pigments, one can purchase the colors ground in oil and mix them with oil and turpentine. Or the stain to imitate any wood may be purchased at any paint shop.

Prepared wax for floors may be bought either in the form of a paste or liquid. When the paste is used, the floor must be thoroughly polished, but with the use of the liquid polish no rubbing is required. The paste may be prepared at home in the following manner: Cut a pound of yellow beeswax and put it in a bowl on tin can. Place the vessel in a pan of boiling water, stirring frequently until the wax is soft, but not liquid; then take from the fire and beat into it one pint of turpentine. The wax will now be ready for use. When the wax polish is not fresh made it should be softened by gentle heat before it is put on the floor. Water should never be used in cleaning a waxed floor. Wet a woolen cloth with turpentine and rub the soiled places with it. When the floor is all cleaned go over it with a woolen cloth slightly moistened with soft wax. Let it rest a few hours, then polish with a weighted brush.

An old and greasy floor can be greatly improved by a thorough scrubbing with soap and sand followed by a bath of ammonia water. Another good way to remove all grease and paint spots and restore the color of the floor is to mix one pound of common wash soda, one pound of quicklime, and one gallon of boiling water. Saturate the floor with the solution, sprinkle clean, sharp sand over it and scrub with soap and water. This will clean and bleach the floor perfectly, and it may then be stained or waxed.

If there are cracks between the boards and around the baseboard they should be filled up. There are three methods: First, dissolve one pound of glue in two gallons of water; stir into this enough fine sawdust to make a thick paste, and fill the cracks with it; the paste may be colored to match the wood. Second, fill the cracks with putty; one can make the putty by mixing whiting and linseed oil together and kneading it until the paste is smooth; the putty may be colored to match the wood. Third, soak finely shredded paper in water and boil it until it is soft pulp, and to every two gallons add one pound of glue.

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SCIENTIFIC AMERICAN SUPPLEMENT 1595 presents a thorough discussion of sand for mortar and concrete, by Sanford E. Thomson.

The cracks must be filled solid and even with the boards. After the crevices are filled shellac or prepared house paint may be applied. When paint is used the floor should be varnished after the second coat is thoroughly dry. Oak color is more satisfactory in paint than a lighter or a darker shade, as it does not show dust and wears well. To keep a painted floor in good condition it should be dusted every day and oiled occasionally. Crude oil is good for this purpose, and should be applied with a flannel or other lintless cloth. Rubbing afterward with cheesecloth preserves the polish. Where milk is plentiful it forms an excellent substitute for oil, and is preferable in point of cleanliness. Painted floors that are very dirty may be washed with skim milk or with soap and water. A scrubbing brush should never be used on a painted or varnished floor.

Varnished and painted floors will keep bright for years if they are wiped clean once a month with a cloth wrung out of warm water, then rubbed with a cloth wet with kerosene and finally rubbed briskly with a woolen cloth.

When an oiled floor is soiled it may be cleaned by rubbing with crude petroleum or kerosene. It may also be washed with hot soapsuds. It should always be rubbed perfectly dry.

A pretty and artistic way to treat the floors of bedrooms, especially those in summer homes, is to enamel them in the colors used on metal bedsteads. These dull shades harmonize beautifully with wall papers, and the matting and denim used for wainscotings. Moss-green shingle stain and the dull copper color used on roofs are very effective with white woodwork, and Dutch blue enamel is just the thing for the floor of a room where the Delft coloring is wanted. No matter what color is chosen, the effect will be better if the floor matches the tone of the walls. The enameled floor should be varnished and waxed to get the best results. In staining or in painting floors the mistake of hurrying the work is often made. To be well done the work must be very slowly done, allowing plenty of time for every coat of paint to dry thoroughly before another is applied. It is a very desirable thing, if possible, to have the floor untouched for at least twelve hours after the rubbing on of the final application of oil or wax. The floor must be allowed to set and harden if you want it to present a thoroughly satisfactory appearance.

It is a good plan to have the kitchen floor stained with potash. It is an excellent stain for any floor, but more particularly for that of the kitchen. A quarter of an ounce of permanganate of potash to each quart of water should be used. It should be applied freely and quickly to a dry floor with a cloth or brush, repeated for a dark color. When it is applied hot it will penetrate the grains of the wood and kill insect germs that may be lurking there. Care should be exercised in handling so that it may not come in contact with the hands, as it is a caustic, therefore one should wear rubber or leather gloves in the operation. A floor thus heated may afterward be coated with linseed oil, shellac, wax, or varnish.

For a piazza floor there is no better finish than linseed oil. One thorough oiling should keep the boards in good condition all summer. Oil again in the fall to preserve the boards through the winter. The floor should be swept and washed clean, and when it is dry it should be rubbed with boiled linseed oil. The next day apply a second coat, rubbing in well. The floor will be greatly improved by rubbing with coarse woolen cloths a few days after the oiling. Sweeping and an occasional washing are all that such a floor requires during the summer.

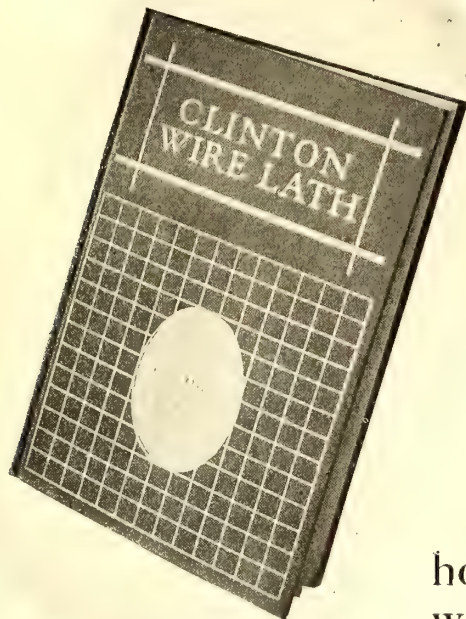
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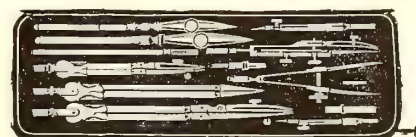
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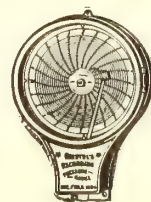
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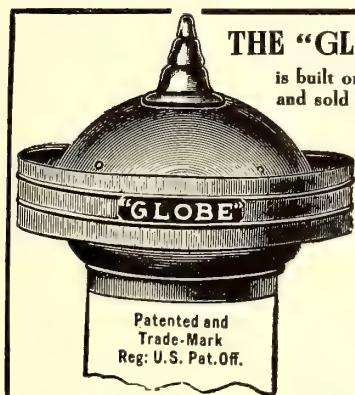


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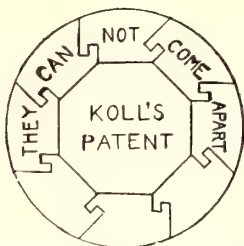
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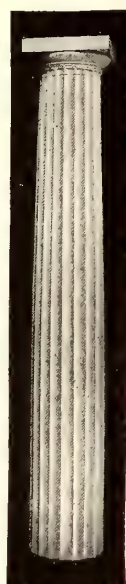


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PLANTS FOR THE TERRACE

By Ida D. Bennett

A CERTAIN degree of formality, of amenableness to pruning and training in the way it should go, is desirable in the plant of the terrace that is not found in plants of lush straggling growth but has its highest expression in the little bay trees—those prim, self conscious little upstarts that so many persist in admiring through a mistaken idea that what is costly must necessarily be also admirable. I wish some one would propagate a variety of bay tree that was practically indestructible and self propagating so that they might become so common that we would see the last of them. There is, however, a happy medium between the supercilious primness of the bay and the wanton luxuriance of the fuchsia or other half trailing plant that is found in the hard wooded shrubs with evergreen wax leaves and beautiful flowers such as the various oleanders and others of their class. The oleanders alone have so many varieties, are so beautiful in flower and leaf, so readily trained into symmetrical form that they should be prime favorites for the terrace or steps.

Some twelve or fifteen of the neriums or oleanders are to be had, ranging from pure white through the most delicate peach blow and pink to dark purplish red and shades of yellow. When used for terrace work they should be kept trimmed back to a rather dwarf form and not allowed to grow tall and lank. The old-fashioned double pink—splendens—will bear comparison with any of the later, rarer sorts and there is a variegated foliage variety of the splendens that is striking whether in flower or not, the foliage being variegated with cream, pink and white. Madam Peyre is a showy sort with large creamy yellow blossoms with pink centers; all are well worth cultivating.

One of the most beautiful of the hard wooded greenhouse shrubs is found in the Chinese hibiscus. This, in its many varieties, with its beautiful waxy leaves and great gorgeous flowers is an object of admiration wherever seen. There are numerous varieties of the plant all of which are well worthy of cultivation, but the Magnifica—an immense double rosy scarlet—is of all varieties the finest, the flowers measuring about five inches in diameter and being produced in the greatest profusion; the foliage of this variety is especially waxy and handsome. There is also a very pretty variegated foliage sort that is worthy a place in a collection of hibiscus, though as a pot plant it does not make the robust growth of many of the other varieties. The hibiscus is a little whimsical in its requirements; grown in too much shade it develops a quantity of beautiful foliage, but will not bloom, while in too hot sunshine the leaves are inclined to burn, but the sun, especially in the morning, is necessary to bring out the bloom, which it does in abundance. The plant should never lack for water but should be given it in abundance; it will, also, be well to supply it during the growing season with an occasional dose of liquid manure; it blooms better when somewhat root bound and, for this reason, does better in tubs and pots than when planted in the open ground.

Several varieties of the bamboo may be used with good effect on the terrace; the best of these is, probably, B. metake, the largest leaved of the bamboo family, though one of the dwarfiest in stature, rarely exceeding ten feet in height. It is an especially rugged constitution and may be grown as a tub plant on the terrace during summer and as a corridor or drawing-room plant during winter and in any and all of these situations will do itself credit. It may even be grown in the open ground the

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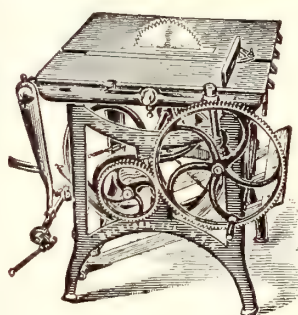
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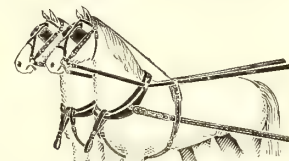
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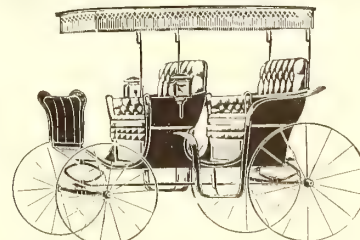
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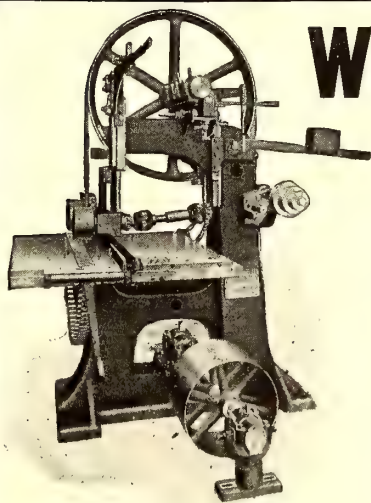
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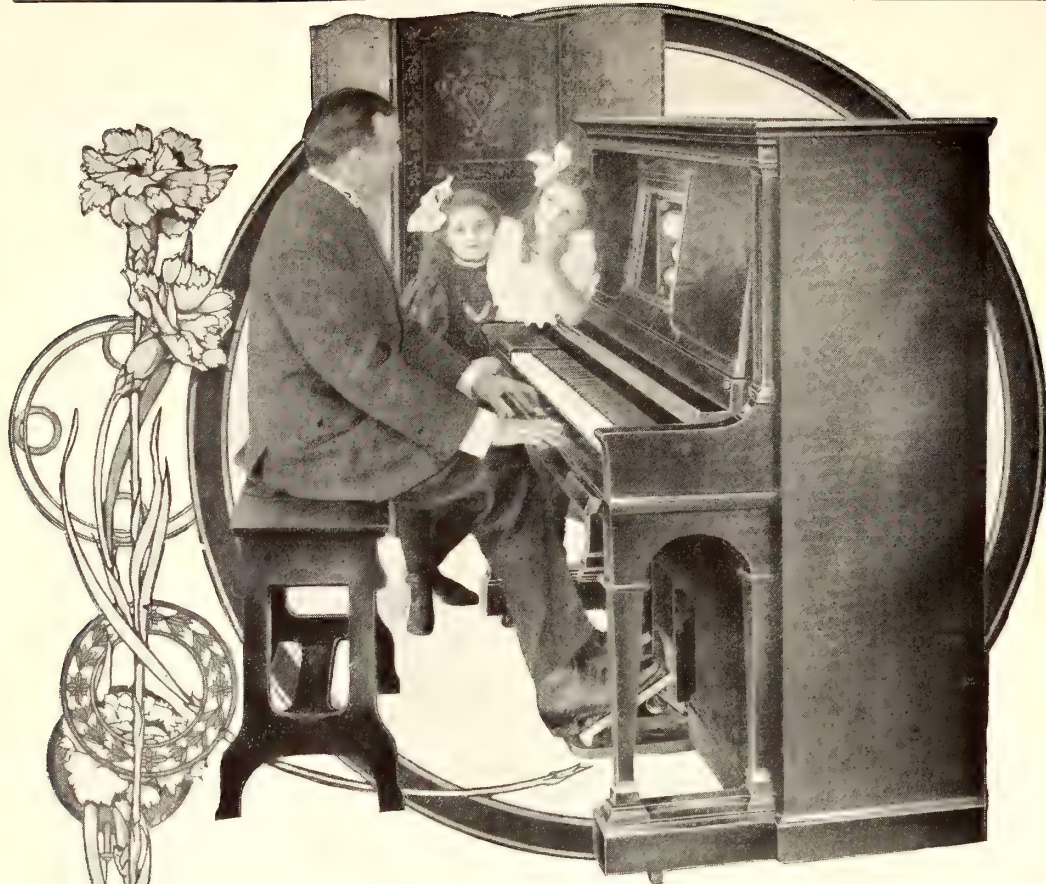
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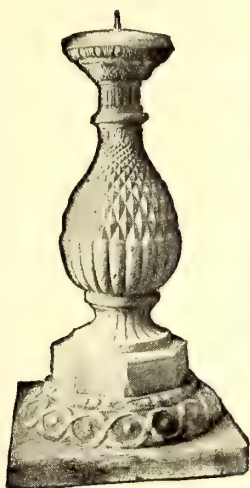
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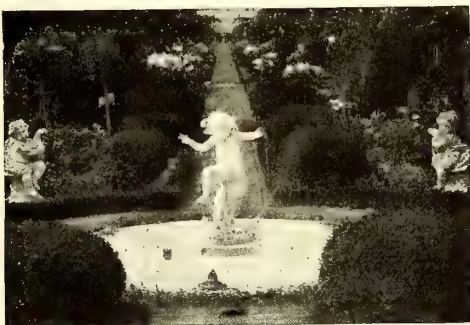
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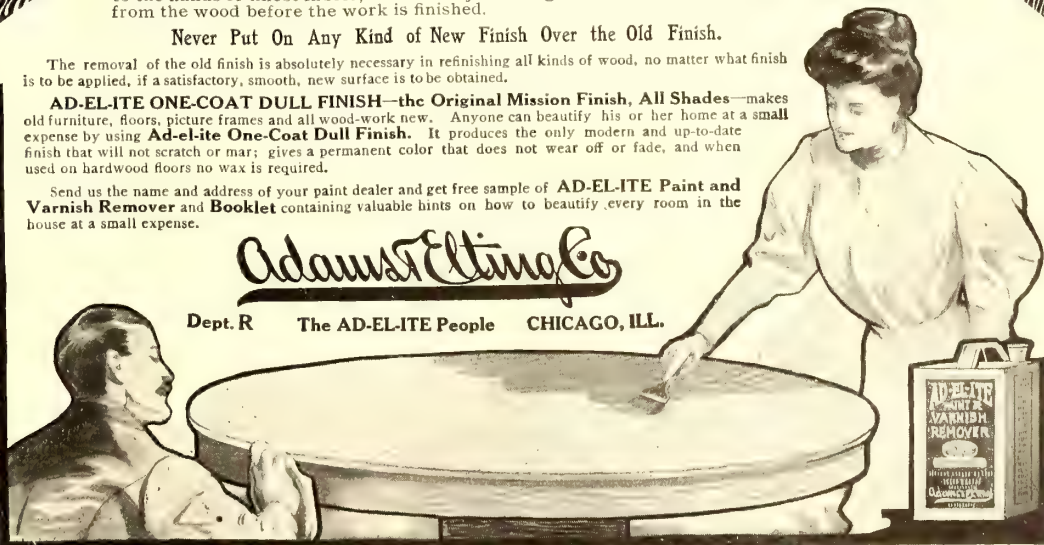
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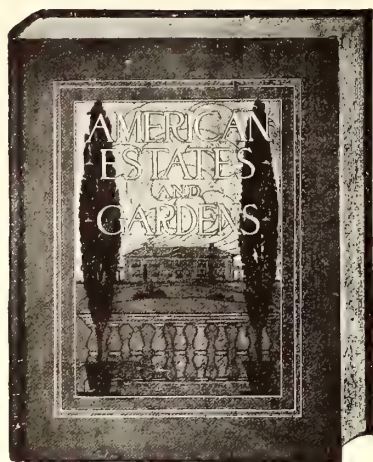
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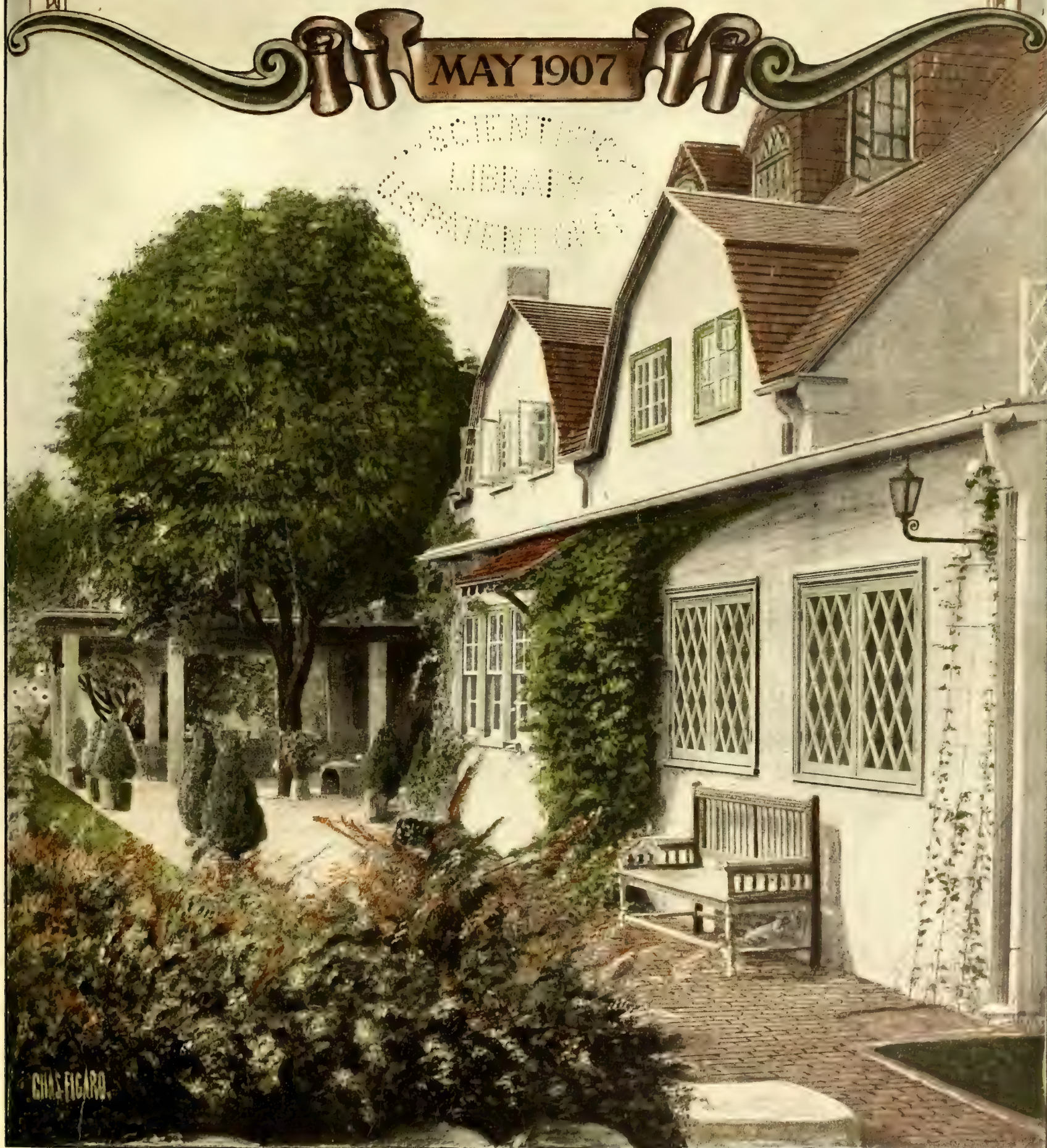
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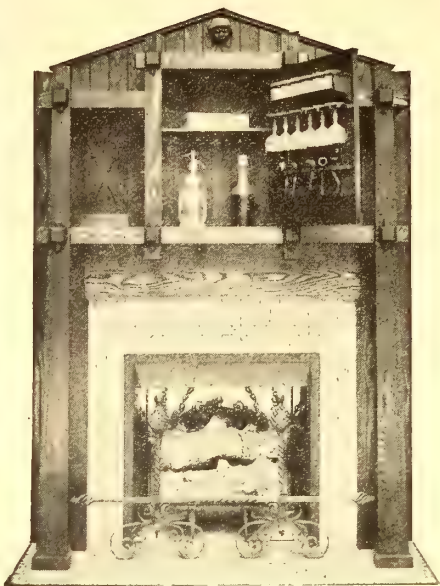
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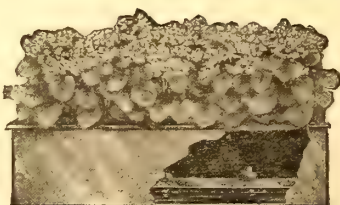
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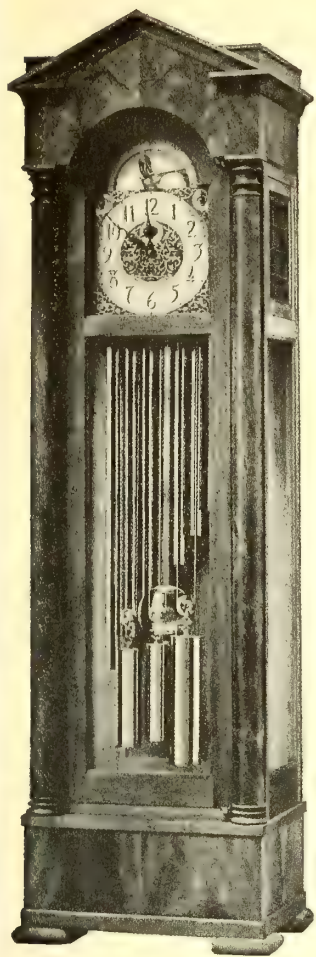
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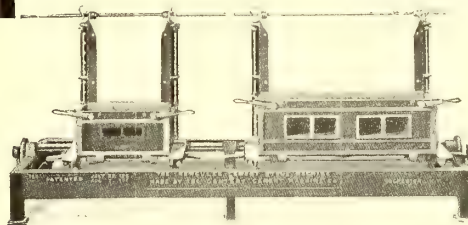
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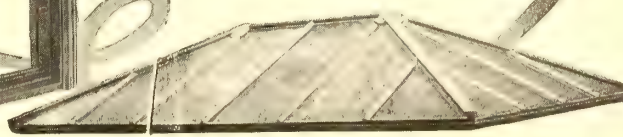
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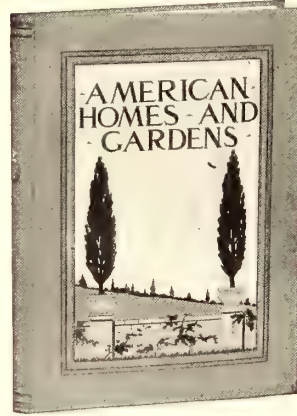
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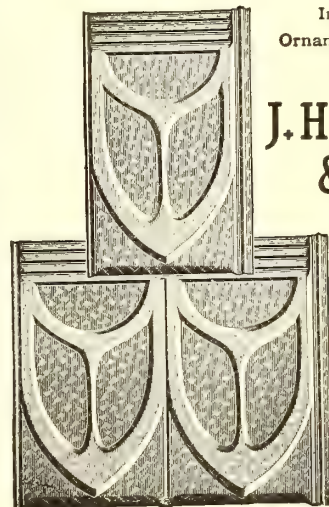
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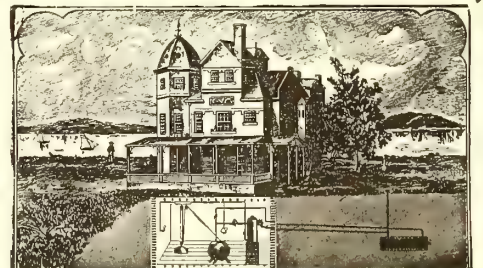
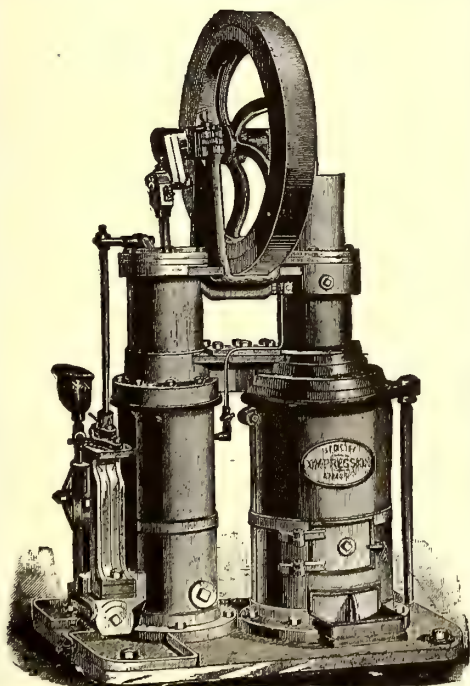
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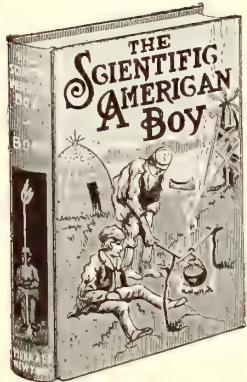
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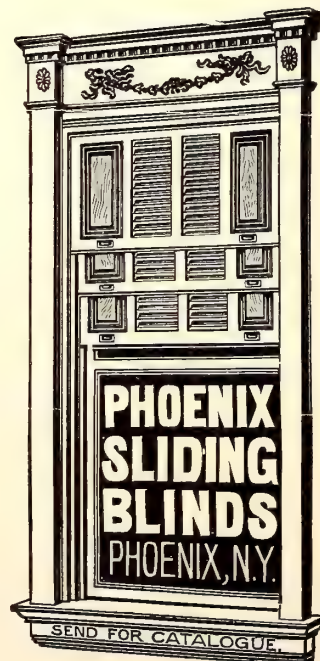
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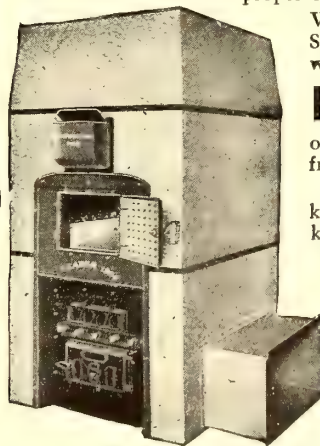
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The Lily Pond and Pergola in the Garden of Frederick P. Hill, Esq.

AMERICAN HOMES AND GARDENS



Volume IV

May, 1907

Number 5



Mr. Hill's House Is Perched on the Top of the Highlands," at Water Witch, New Jersey

Monthly Comment



THE summer home is as old as history. Potent as the cities have always been for great masses of population, the very development of the cities has caused a reaction toward the country by those who lived in them through choice or necessity. Not, of course, in the way of returning to the soil for a livelihood, but as a means of relaxation, a change, a respite. But it is nothing new, this flight into the country, for city folk have been doing so for centuries, and will doubtless continue to do it for centuries to come. And a very agreeable thing it is, too, to have one's own home in quiet surroundings, where one may spend the better part of the year in peaceful enjoyment. The simple life requires no cultivation in the country, for supposedly it is the one form of life that is not only congenial to the soil, but which is deliberately encouraged by it.

THE native, to be sure, will hardly admit this. His life is to him too utterly simple to be tolerated a moment longer than the direst necessities require. He arises at an unearthly hour, performs the most arduous and uninspiring tasks, has no relaxations that seem to him relaxation, and retires to bed, prostrated with fatigue, at the earliest possible moment. He pants for variety, he yearns for activity, he hankers after excitement, he longs for unrest. If a city newspaper comes his way he stumbles through its columns seeking for the most sensational episodes. His unnourished brain creates a completely artificial existence, in which all sorts of impossible and exciting events occur, and in which he, often enough, plays the part of unexpected hero, and which he regards as the real life, the only life worth living, the very thing to do, the acme of human bliss. The crowds, the rush, the turmoil of the city as he imagines them, sum up and contain the very essence of civilization. Perched a-top a barrel he discusses these matters with his fellow sufferers, and berates the fate that retains him amid the green fields and shady woods of the country.

QUITE a different view of the case is taken by the city gentleman who has acquired a competency and retires to the country for a rest and a change. He builds himself a great house, he starts a farm on the most expensive scale, he installs a gardener who grows beautiful plants that the owner may casually glance at once a week or so, he lays in horses, carriages and automobiles, and settles down to a quiet existence. The end of every week finds his great house filled with guests, who conduct themselves in the rural districts exactly as they have been accustomed to in the city. As many as possible rush off in the automobiles and scour the country roads at a pace that is equally successful in preventing a vision of the adjoining landscape and in arousing the ire of the farmers, who want only the particular kind of excitement that appeals to their personal ideas. Balls, parties, and picnics, gayeties of every sort, the city life transplanted into the country, magnified, enlarged and exaggerated, this, to many, is exactly what the country is for, and for nothing else.

BETWEEN these two extremes—for they are extremes, in which the ills and advantages of the country are exaggerated in most singular fashion—are others who attack the problem of country living in more reasonable ways. Very many persons have ascertained that it is quite possible to thoroughly enjoy a summer in the country without the burden of elaborate housekeeping, and in a sane and reasonable way. A modest house, modestly equipped, is all that is needed, pro-

vided it is situated amid beautiful surroundings, is not too far removed from the base of supplies, and is sufficiently accessible from the city to permit the ordinary routine of existence to be carried out without annoying interruptions. Those able to live in the country in this way have much the better of it, and can snap their fingers at their richer neighbors, who must be surrounded with a retinue of dissatisfied servants, and whose household affairs are conducted with the same fuss and at the same expense as in town.

IN undertaking a country life, whether for a temporary sojourn in the summer, or for permanent residence all the year around, it will be well to remember that you are the chief person concerned. If all the experiences of all the persons who ever tried country life were collected together, classified, arranged and annotated, they would still remain the individual experiences of other people. If it be true that what one man can do another can do, the dictum falls to the ground when it comes to removing from the city for any length of time. Fortify yourself as you may with what has befallen others, be as completely prepared as circumstances may permit against the pitfalls that have attended the career of others, the fact remains that what is going to happen to you will be new to you, and even what has happened to others will take on a fresh and unfamiliar air when personally applied.

AND of course things are going to happen. You have to find out if your land will grow anything; you have to learn if your chickens will lay and what to do to them if they don't; you have to find out that it is the easiest thing in the world to be fooled in a horse deal; you have to realize that expenses are often larger than the estimates and sometimes greater than the income; you have to find out that the country dealer in food supplies, in ice, in coal, in everything, is something quite different from the grocer or the department store in town, and you have to find out that the people you are living among present quite unknown types of humanity, the study of which becomes tiresome when forced upon you without chance of change. There is a heap to learn in country life that the books will not tell you of. You are bound to lose faith in the written guides, and are lucky if you come out even at the end of the season, and not too much exhausted.

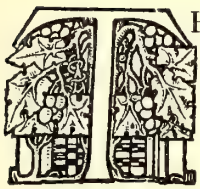
AND the country folk! They never realize that your ideas may be different from theirs. You have no sooner arranged for your house and established yourself in it than you become the most interesting persons in the whole county. The light that beats around the throne is not fiercer than that which discloses all your doings to the minds and eyes of a countryside that has nothing else to think about. Your most commonplace actions are instantly erected into monuments of most profound eccentricity. Your whole life history, including many items that you must have forgotten yourself, for you do not recall them, is subjected to a scrutiny that would shame the commentators of Shakespeare. Your slightest remarks are treasured, not indeed as words of wisdom, but as something to be handed back to you at some remote future when you have forgotten all about them. There is ampleness of beauty in the country, many fields, much beautiful woods, charming scenery and innumerable rural delights; but of personal privacy there is none at all, and personal seclusion hardly comes even when the night has fallen, the windows been closed, the curtains drawn, and the sweet peace of sleep envelops the inhabitants.

Summer

Homes

Costing Upwards
From Fifteen Hundred Dollars

By
Francis Durando Nichols



THE summer home—a house built and owned expressly for summer use—has become so popular in America that it may quite rightly be classed as a national institution. It is a kind of dwelling that, for a number of years past, has excited the liveliest interest on the part of those able to afford them, and which, in the meantime, has commanded the best interests of our architects.

Nor is the summer home always intended for summer use only. The attractions of one's own summer home in the country, in the mountains, or on the seashore are so potent that the period of occupancy often begins early in the spring, and is extended until the very latest fall. Hence many of these houses are built in such a substantial manner that they are, in reality, all-the-year-'round residences. While many who build them are satisfied with small and inexpensive cottages, there is a very large number of summer residents who require complete and elaborate houses.

But whatever the grade of house may be—classifying them by their cost—it is essential that they be agreeably environed, built in pleasant localities, and provided with home grounds of their own. Thus the garden, whether

it be simple or elaborate, natural or formal, is an essential part of the summer place. The selection of the site, therefore, is a matter of the first consideration in building the summer home. A good many of the subjects to be considered in this connection are without architectural significance, such as drainage, water supply, dryness of the soil, exposure to the wind, possibilities of waste disposal. All of these are items of the gravest import, few of which can

be determined by the laymen, and most of which require expert advice of the best kind. The architectural problems involved are of a different kind, the chief esthetic consideration being the advisability of building a house in complete harmony with its environment. The question is, in truth, more than one of advisability, but one of absolute necessity. The surroundings and setting for a summer home, therefore form a very important element in the selection of the design.

In the six summer homes illustrated in this article it is aimed to show an equal number of distinctive designs. They include houses that may be viewed as types of the well equipped summer house, costing upward from fifteen hundred dollars. They are thus houses of varying cost adapted to various conditions.



Mr. Hill's House Is Approached by Stone Steps with Tubs of Blooming Hydrangeas



Only Sufficient Trees Were Cut Away to Form a Clearing for the House in the Forest

**The Summer Home of Frederick P. Hill, Esq.
Water Witch, New Jersey**

The summer home and garden of Frederick P. Hill, Esq., at Water Witch, N. J., illustrated on pages 165, 166, and 167, constitute a place of distinctive interest. It is a house perched on the top of the "Highlands" in the village of Water Witch, a rugged park of many acres, studded with forest trees, and a spot of historic interest, intimately associated with James Fenimore Cooper, who at one time lived on the "Highlands," and whose place now forms a part of this park. Here he wrote his well-known novel "Water Witch," to which the place now owes its name.

Mr. Hill's house stands in a dense growth of trees. The gateway to the property is overhung with a mass of trees and shrubs. Below are steps to the winding path by which the house is reached. Further on, and quite near the entrance, is a second flight of steps, with tubs of hydrangea hortensia on either side, at the top. Then come the house steps, painted white, with a white balustrade, leading directly to the entrance doorway, which is shielded by a massive hood. The house is surfaced with natural cedar shingles, which have now taken on a silvery gray color; the trim throughout is painted white. On the east side is a piazza with columns of red brick that support a balcony at the second story, where their summits are surmounted with red terra cotta pots filled with red geraniums and vines—graceful bits of color against the quiet tone of the walls.

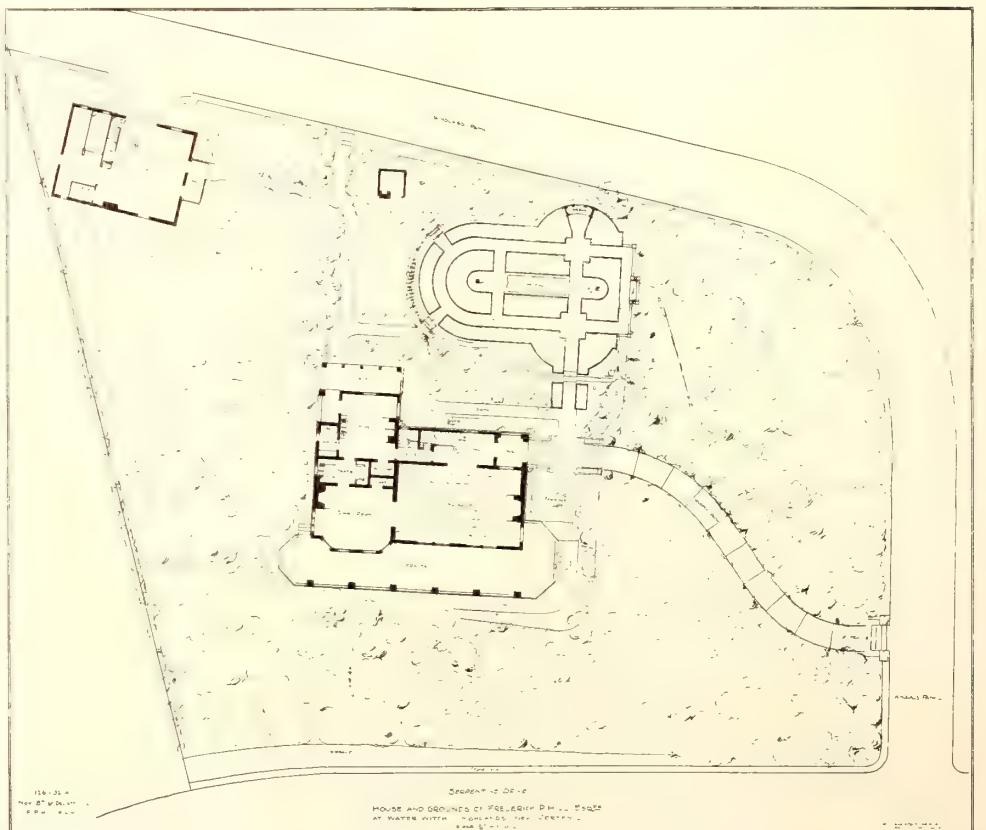
The trim of the entrance hall is painted white. It contains a Colonial staircase, with treads and balustrade painted white, and a mahogany rail. The walls are tinted sea green. The great living-room, which im-

mediately adjoins it on the left, and which occupies the larger part of the first floor, is trimmed with cypress, painted white. The ceiling timbers are exposed and are stained and finished in a soft brown. The walls are colored a soft shade of terra cotta. The large open fireplace, with a chimney-breast rising to the ceiling, is built of common brick and has a shelf of stained cypress. The rugs and bookcases, the old mirrors, clock, and antique furniture make a delightful ensemble. The appropriate inscription by Goethe, "Ueber Allen Gipfeln ist Ruh," is inscribed on the face of the arch over the fireplace.

The adjoining dining-room has walls tinted with Colonial yellow and trim painted white. The open fireplace, with its ceiling-high chimney-breast and columns and mantel of old

Egyptian black and gold marble, is a conspicuous feature in the room. French windows open onto the piazza, which is used as a dining-room in warm weather. The butler's pantry, kitchen and its dependencies are completely fitted up, and are trimmed with yellow pine which has received one coat of wax finish.

The second floor contains four bedrooms and two bathrooms. They are trimmed with whitewood painted white. The bedroom walls are tinted in various colors, and the bathrooms are tiled and furnished with porcelain fixtures



A Serpentine Path Helps to Conceal the House from the Outer Roadway



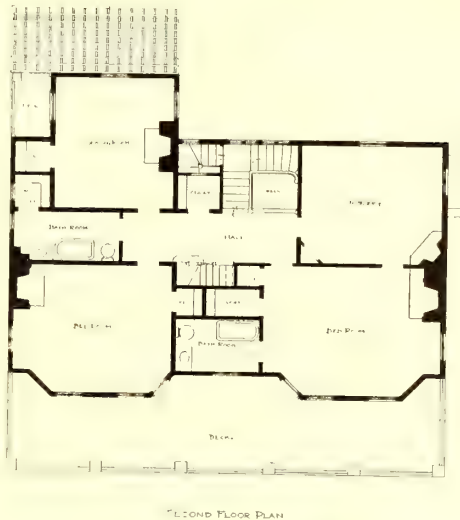
The Mantel of the Dining-room is Old Egyptian Black and Gold Marble

and exposed nickelplated plumbing. An extra bedroom, two servant rooms, and a trunk room occupy the third floor. The cellar is well equipped with heating apparatus, fuel rooms, workshop, laundry, and dark room. The house was designed by Messrs. Hill & Stout, of New York.

The garden and surrounding grounds have been the object of especial care on the part of the owner, the site being originally covered with a heavy growth of trees, of which only enough to form a clearing for the house were cut down. The garden as it exists to-day is the result of an evolution of ideas, in which the predominating thought has been to blend the formal with the informal, to create a garden of formal plan properly environed in the natural growth of trees in which it is placed.

The garden is slightly below the level of the ground around the house, and is reached by two or three stone steps leading down into it. It has somewhat the effect of a small amphitheater, partly inclosed by a formal frame covered with vines, while beyond, and around, are the deep woods, which are the natural characteristics of the whole landscape.

There is an abundance of beautiful bloom here, with somewhat a preponderance of white and yellow. At one end of the



semi-circular pergola is a group of golden-glow; at the other, sunflowers, giant and miniature—two tall masses of yellow flowers. Framing the garden on each side are dahlias, giving the effect of an inclosing hedge. Close by the steps leading into the garden are masses of peonies and hollyhocks, forming a floral gateway, so to speak. Hollyhocks are repeated at the corners and at the opposite end of the semi-circular pergola, framing in the balustrade and seat.

The planting of the various beds has been arranged to obtain a continuously successive blooming. With the earliest spring come jonquils on either side of the pool, followed by Japanese, Spanish, and German iris; then followed by Oriental poppies, and again by Shirley poppies. Finally come *Lilium auratum*, coxcombs, and some African marigolds spotted in to maintain the yellow tone.

Directly in front of the semi-circular pergola is a rose bed, and growing over the pergola are climbing roses that form the final screen in this direction. The central beds are bordered with box; the outer ones are marked by rough stones buried in the earth, presenting a fairly true line to the path, and an irregular broken line on the inner side. Low-growing plants, like portulaca, candytuft, and sweet alyssum



Much Old Furniture Gives a Delightful Character to the Living-room

form an inner border. At one corner of the pool, where the water enters, is a group of pickerel weed, whose arrow-shaped leaves and blue-spiked flowers form a charming contrast with the spear-shaped iris at the other end of the flower beds; close by, a couple of stones jut out from the surface of the water, forming a little spot of shade for the fish on sunny days, and giving a foothold for the chipmunks and birds when drinking.

The pool was made by excavating the ground between two of the flower beds. A wooden form, about eight inches less than the hole, was then placed within, forming a mold for the concrete, which was held by the hard earth on the outer edge. After the concrete was set the form was removed, and ashes and cinders to a depth of five or six inches was spread over the bottom, which was shaped to incline to the outlet. A layer of rough concrete was finished with a smooth coat of concrete about an inch thick, and the top was coped with stone picked up from the adjoining ground and laid with

The second and third stories and the roof are surfaced with No. 1 cedar shingles left to weather-finish. The trimmings are painted white and the blinds bottle-green.

The interior is trimmed with cypress throughout. The reception-hall contains an ornamental staircase and a fireplace of field stone, with a hearth of red brick. The parlor has a small bay window with a built-in seat at the front, and an open fireplace with mantel. The dining-room has two bay windows with seats. The butler's pantry is fitted with a sink, drawers, dresser, etc., and the kitchen is provided with a large store-pantry and sink. An ice box is built in on the rear porch, and is conveniently arranged for access from the kitchen, and by its position precludes the possibility of the ice-man entering the house. There are no regular rear stairs to the house, but provision for this necessary convenience is made by combining a short flight of steps from the kitchen to the front stairway.

The second floor contains a sitting-room, four bedrooms, and a bathroom; the latter is wainscoted and furnished with porcelain fixtures and exposed nickelplated plumbing. All these rooms, as those on the first floor, are trimmed with cypress and finished with hard oil. The third floor contains two rooms and storage space. The cemented cellar, which extends under the whole house, contains a laundry, furnace, and coal and wood bins. Mr. Duncan Gay, of Mount Vernon, N. Y., was the architect.



A Tea House and Water Basin for the Birds Are the Chief Structural Ornaments of the Sunken Garden

the flat side up and the irregular edge toward the center.

The semi-circular pergola, the arbor, and the little pieces of garden furniture were made from cedar. As far as possible, therefore, every effort has been made to minimize the artificial effect of a formal garden. The quite unusual aim has been to create a garden of formal character that should harmonize with natural surroundings of rare growth and beauty.

The Summer Home of Mrs. Alice G. Hubbard, Sound Beach, Connecticut

The summer home of Mrs. Hubbard, at Sound Beach, Conn., is photographed in the illustrations on page 169. It is a simple and pleasant little structure that cost, when completely finished, \$3,530.40. The first story is built of field stone laid up at random. The columns of the piazza and the porte-cochère are of hardwood supported on bases of the same stone. The chimney is also built of field stone.

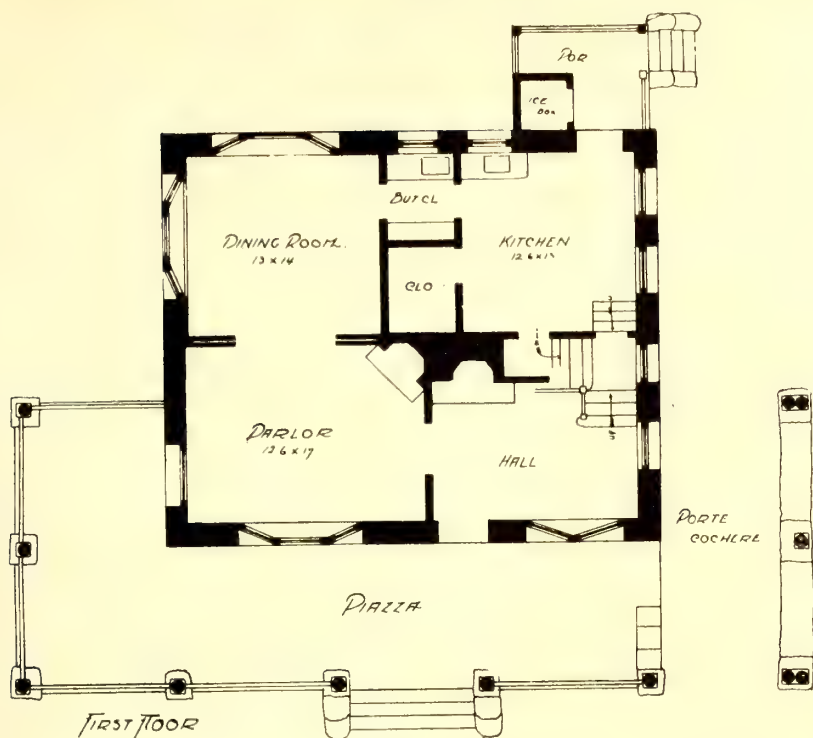
The trimmings and blinds are painted a dark red.

The plan provides for a large living-room, a dining-room, and kitchen, with the usual sleeping dependencies, and sleeping-rooms and bathrooms on the second floor. The living-room occupies the whole of the front part of the house, and is a vast and cheerful apartment. The woodwork, which includes a six-foot wainscoting, is treated with white enamel; the walls are covered with crimson burlap; and the spaces between the beams of the ceiling are tinted Colonial yellow. The broad and spacious staircase has oak treads, white enamel balusters and newels, and a mahogany rail. The chimney, which is built of field stone from top to bottom, is completely exposed within this room, and contains the fireplace. Two Ionic columns help to sustain the beams of the ceiling.

The adjoining dining-room is likewise treated with white enamel, and has a high wainscoting finished with a plate rack. It contains a field-stone fireplace. Two china closets with glass doors are built on either side of the room. The

"Redruff Farm," the Summer Home of James K. Hoyt, Esq., Sound Beach, Conn.

Mr. Hoyt's summer home is illustrated on page 172. The underpinning and chimneys are built of field stone laid up at random; the superstructure, both walls and roof, is covered with matched sheathing and shingles left to weather-finish naturally.



wainscoting and are supplied with porcelain fixtures and exposed nickelplated plumbing. The third story is given up to storage uses. Mr. Herbert Lucas, of New York was the architect. The cost of the house was six thousand five hundred dollars.

**"Birch Nest," Summer Home of Douglass Sherley, Esq.
Bar Harbor, Maine**

A very novel and interesting house is that of Mr. Sherley's, illustrated on pages 170 and 171. Rock-faced boulders are used for the first story and the chimneys, and birch logs for the second and third stories. The boulders were carefully selected and were put in position with great care, so as not to show the mortar joints. The birch logs retain their bark, and the whole house presents a thoroughly rustic effect that admirably harmonizes with the silvery gray shingled roof. The windows, with small panes of glass, are a conspicuous feature of the exterior.

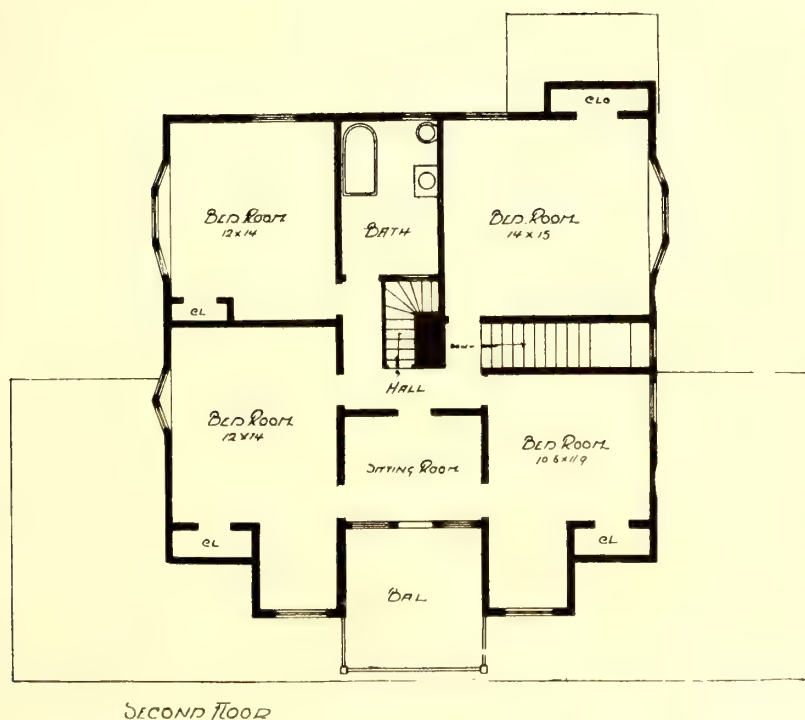
The main entrance to the grounds is marked with gate posts of huge boulders strapped together with iron bands and provided with an anchor and chain, which can be

butler's pantry is finished with the usual equipment, and the kitchen and laundry are likewise supplied with the best modern conveniences. The latter rooms are trimmed with yellow pine.

The second story is also finished with white enamel. It contains five bedrooms and two bathrooms, together with two bedrooms for the servants, which are reached by a private stairway from the kitchen. The bathrooms have tiled



An Ample Pitch Is an Essential Feature of the Roofs of Most Summer Homes



stretched across the opening. These novel piers are completed with clusters of farm lanterns, which are lighted at night. A nautical lantern, hung from an ornamental iron bracket, lights the entrance porch. The entrance door is made of rough boards hung on large hinges of wrought iron; the hinges are painted white, and the door is stained soft brown.

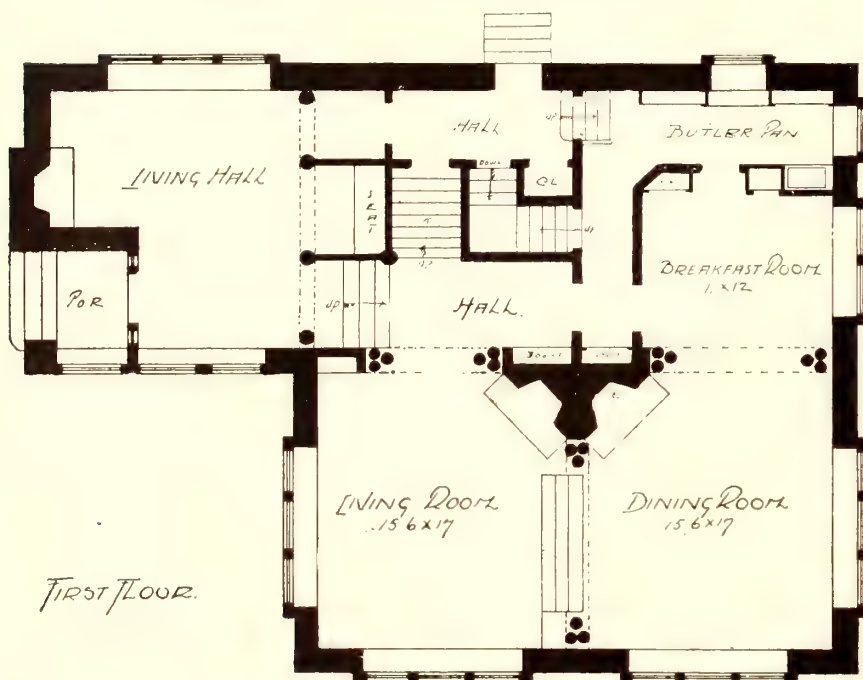
It is no exaggeration to designate the interior as unique. The timber work is rough hewn and exposed throughout, and the archways and openings between the various rooms of the first story have clusters of birch logs in lieu of columns. The wood of the living-hall is stained with a soft greenish tint; the ingle-nook walls are of stone; and the fireplace is built of Roman brick and has a hearth of small cobble-stones laid in cement mortar.

A short flight of steps leads to the stair hall, from which the living-room is reached. This living-room is stained a yellowish tone, and has green glass windows on the left which shed a soft light. There is a stone fireplace, built of large granite blocks, with hearth of flat cobble-stones laid in cement mortar.

Again a short flight of steps, and the dining-room is



The Entrance Door is Made of Rough Hewn Boards, Stained Green and Hung on Wrought Iron Hinges Painted White



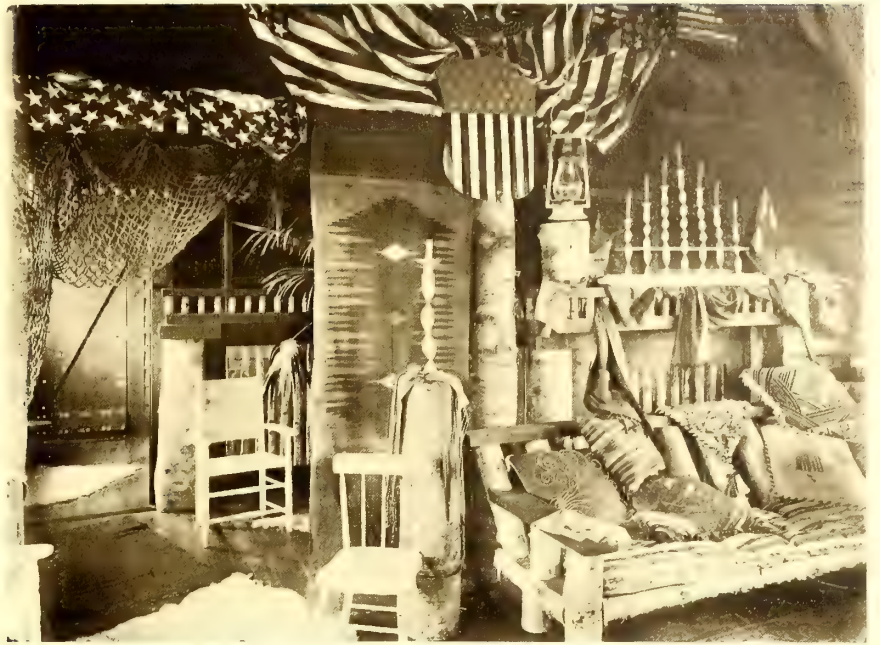
Rock Faced Boulders and Birch Logs



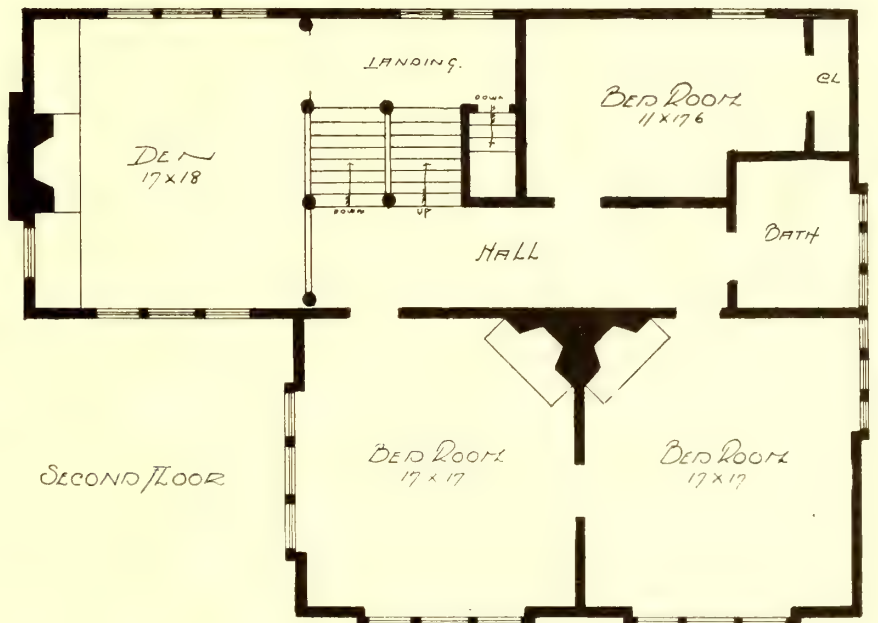
A Breakfast-room Off the Dining-room is Quaintly Furnished, and Has Built-in Shelves to Hold China



The Den is a Fascinating Room in the House, Partly Lined and C



A Corner of the Living-hall Has a Rustic Settle Over Which Altar Lights Are Placed



Put to Structural Uses in "Birch Nest"



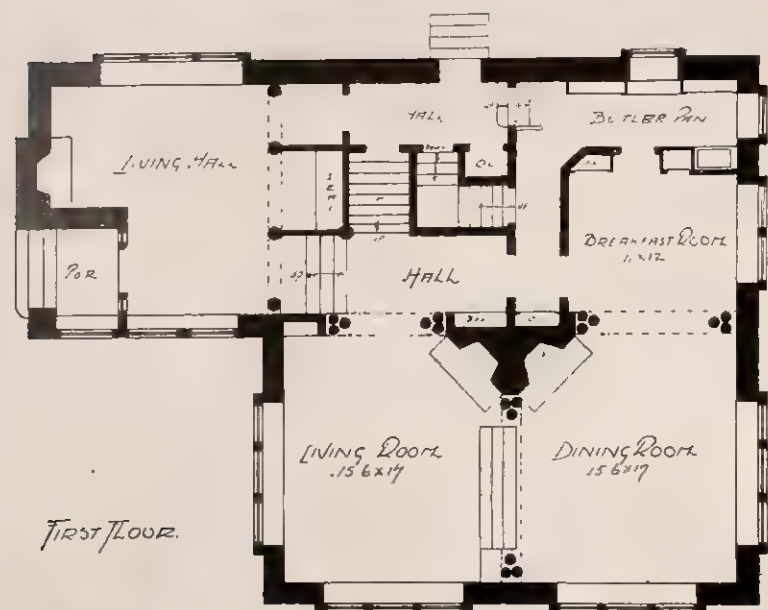
Second Floor, Open to the Roof and
Ded with Birch Sticks



The Dining-room Has a Stone Fireplace and an Archway Supported on
Upright Birch Logs



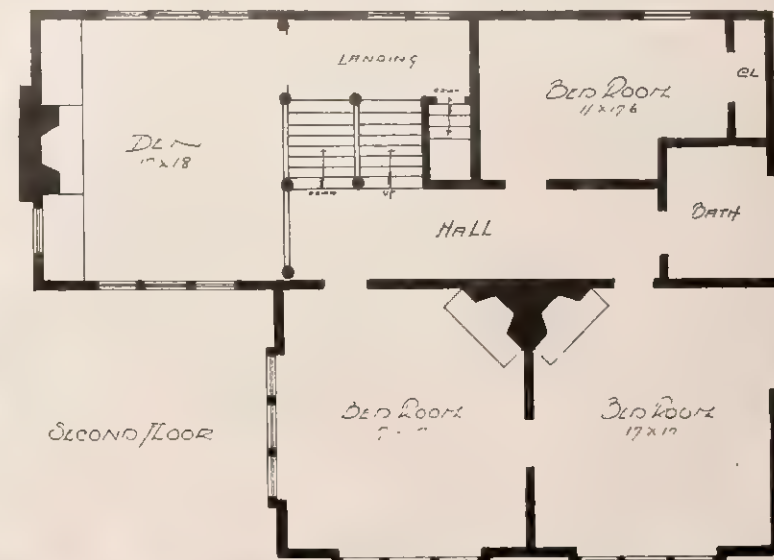
The Entrance Door is Made of Rough Hewn Boards, Stained Green and Hung on Wrought Iron Hinges Painted White



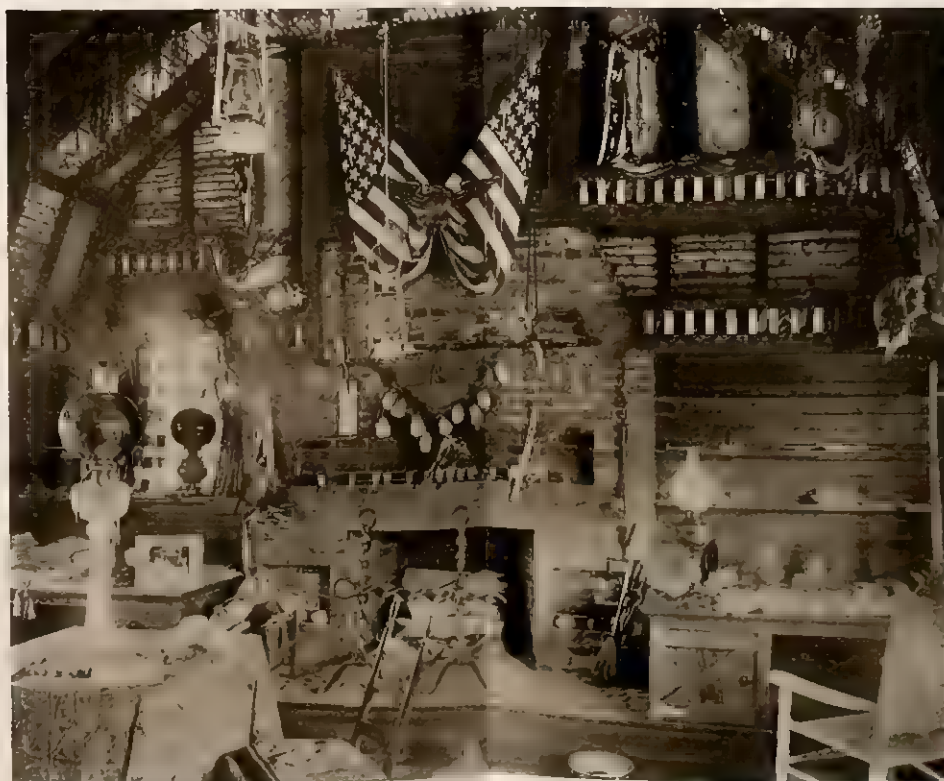
Rock Faced Boulders and Birch Logs Are Put to Structural Uses in "Birch Nest"



A Corner of the Living-hall Has a Rustic Settle Over Which Altar Lights Are Placed



A Breakfast-room Off the Dining-room is Quaintly Furnished, and Has Built-in Shelves to Hold China



The Den is a Fascinating Room in the Second Floor, Open to the Roof and Partly Lined and Ceiled with Birch Sticks



The Dining-room Has a Stone Fireplace and an Archway Supported on Upright Birch Logs

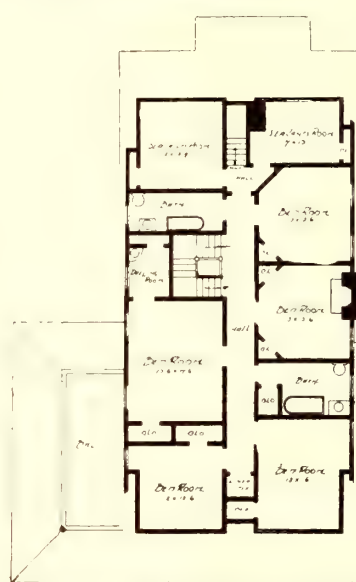
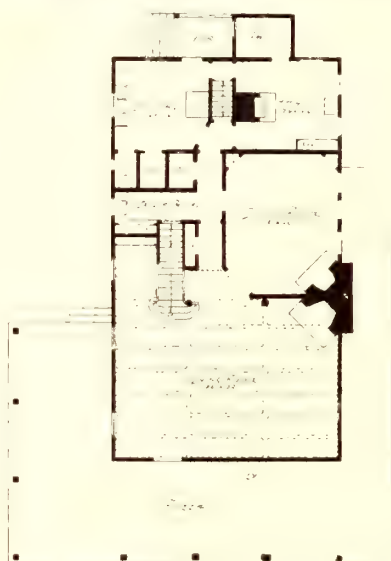
reached. The wood is stained a soft green, and the large open fireplace has massive granite facings and the usual hearth. Columns of birch logs separate this room from the breakfast-room. It contains an attractive built-in china cabinet. Adjoining is the butler's pantry, while the kitchen, servants' hall, and their dependencies are in the basement beneath the breakfast and dining-rooms.

The den is a wonderful room over the living-hall. The walls are faced to the height of seven feet, above which the studding and rafters are exposed to view. The intervening spaces between the rafters and studs are filled in with birch sticks laid horizontally. The fireplace is of rough brick, with the facings carried up to nine feet. The hearth is a foot above the floor, and is laid with flat cobble-stones; on either side are wooden desks built in.

A short flight of steps conducts to the chamber



The House is Kept Close to the Ground with New England Accuracy



floor, which contains three bedrooms, the woodwork of one of which is stained an olive tone, another yellow, and the third red. Here, also, is a completely furnished bathroom. The third floor contains the servants' quarters and storage space. The house was designed and built under the direction of Mr. Sherley, who is an expert along the line of this form of construction. Mr. Sherley selected the proper time of the year for the cutting of the logs for his house. He went right into the heart of the Maine forests, selected the trees to be cut, had them placed on sleds, and shipped direct to Bar Harbor. If one wishes to build a log house and retain the bark after the house is built, one should see that they are felled at the proper time. Mr. Sherley, also, brought from the Maine woods men familiar with log-house building, and in this way secured a very pleasing result.



The Living-room of "Redruff Farm" Has a Stone Chimney and Contains Some Quaint Furniture

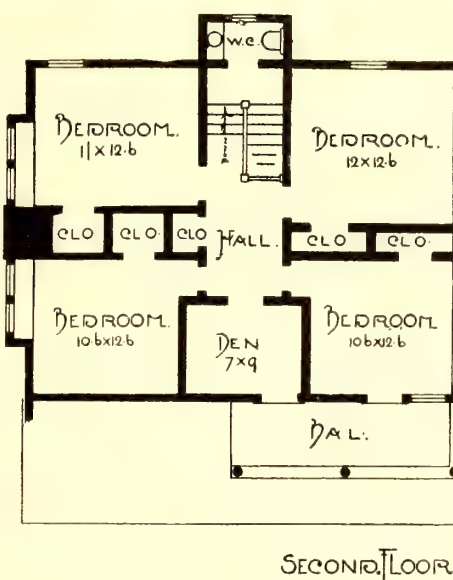
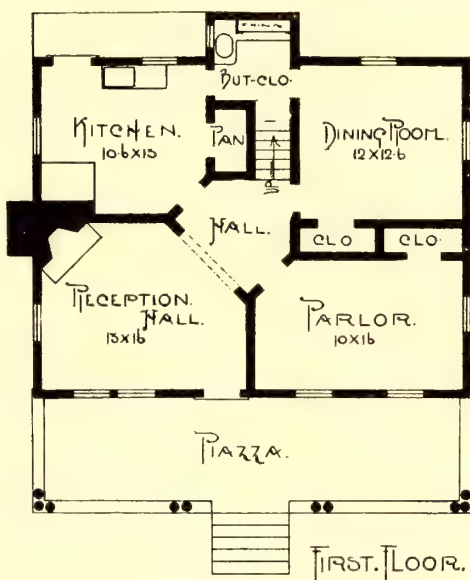
The Summer Cottage of
Francis Cushing, Esq.,
Cushing's Island, Me.

Mr. Cushing's summer home is illustrated on page 173. The house is built on cedar posts with stone footings. The cellar has an outside entrance and is inclosed within narrow-beaded stuff. The upper parts of the house are sheathed and shingled and painted a dull shade of olive. The shingled roof is painted red. The columns of the piazza and balcony are of rough cedar posts, dressed and finished naturally. The chimney is built of rock-faced stone laid up at random.

The interior is trimmed with spruce, with natural finish. The walls and ceilings are unplastered, with exposed beams, which are dressed and finished naturally. The reception-hall has an open brick fireplace with a wood mantel, and is separated from the staircase hall by an archway. The staircase has ornamental newels, balusters, and rail. The dining-room has a large butler's pantry, and the kitchen is wainscoted and furnished with the usual fixtures. This floor also includes a spacious parlor, while the second floor contains four bedrooms, den, and toilet. The cottage cost one thousand nine hundred and fifty dollars. Mr. John Calvin Stevens, of Portland, Maine, was the architect.



The Stone Chimney Is Completely Exposed from Foundation to Summit



"Birds' Nest,"
the Summer Home of
Harvey D. Murray, Esq.,
Delano Park,
Cape Elizabeth, Maine

Illustrations of
Mr. Murray's house
are given on page
174. It cost but one
thousand five hun-
dred dollars, and is
a remarkable illus-
tration of economic
building. The house
stands on a cliff,
which affords an ex-
cellent basement,

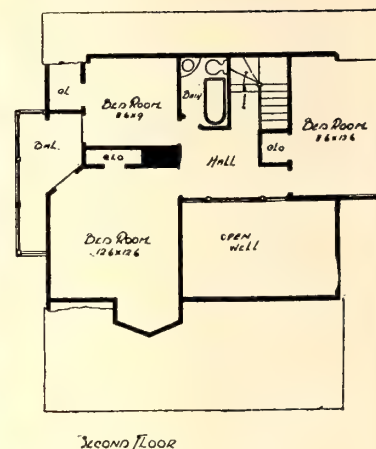
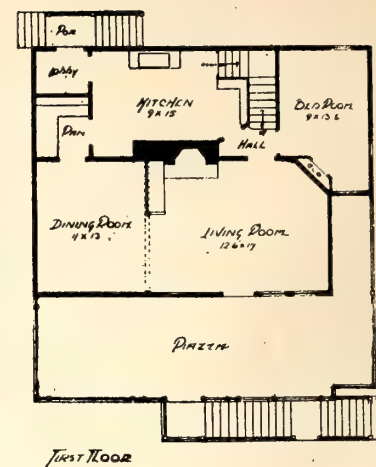
that is inclosed with matched stuff painted dark bottle-green. The upper walls and roof are inclosed with matched stuff, with white cedar shingles left to finish naturally. The trimmings are painted dark bottle-green.



Mr. Francis Cushing's Summer Cottage at Cushing's Island, Maine



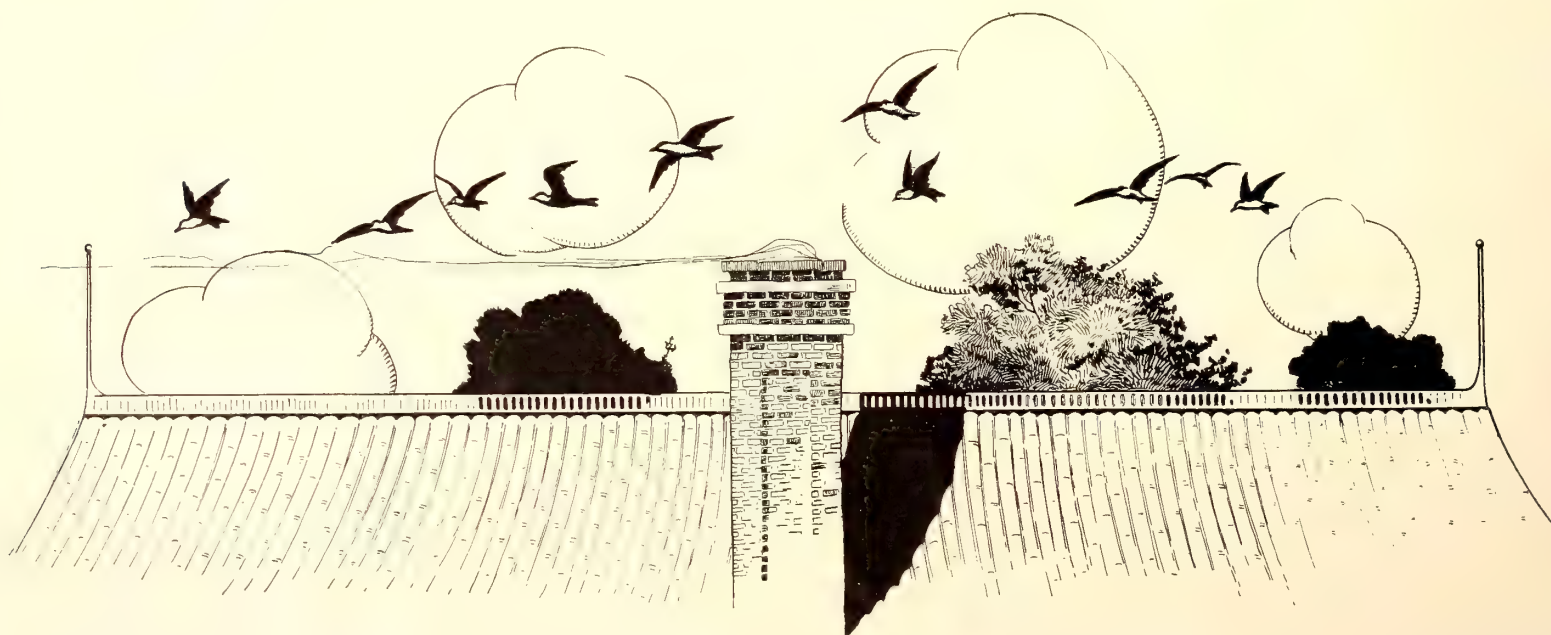
"Bird's Nest," the Summer Home of Harvey D. Murray, Esq., at Delano Park, Cape Elizabeth, Maine



The interior is trimmed with white pine, with studding, floor joists, and partitions all dressed and exposed. The living-room is two full stories in height. It has an open fireplace with facings and hearth of red brick laid in red mortar; the mantel is wood. At the side is a paneled seat, with an opening above filled in with spindlework. Spindlework again forms the partition between the living-room and the dining-room. The pantries and kitchen are completely supplied with all modern conveniences. The house contains but a single staircase; it is in the private hall which gives access to the kitchen, and is isolated from the living-room.

There is one bedroom on the first floor, and three on the second. The latter contains a bathroom furnished with porcelain fixtures and exposed plumbing. The servants' room, laundry, and storeroom are in the basement. Mr. John Calvin Stevens, of Portland, Maine, was the architect.

Just one word of caution in conclusion. The prices given for the houses described in this paper represent the exact cost of their construction, but owing to the greatly increased cost of labor and material in the last few years some increase in the amounts should be added in making comparison with contemporary work.



A BUNGALOW AT HIGHLAND BEACH, N. J.

By
NICHOLAS DURAND.



THE chief charm of a bungalow is its simple characteristics, and when an architect attempts to elaborate upon these ideas of simplicity he forfeits the principle of the art of bungalow building. Mr. John H. Duncan, an architect of New York, has designed for Mr. Hettrick a most unusual bungalow for this vicinity, having used the Californian Mission style for his prototype.

The exterior of the house is interesting; three of its walls are enclosed with a piazza extending around three sides of the building, which is covered with a roof gracefully falling down from the main roof. The bungalow is built on cedar posts, on the inside of which are two-inch planks to form a cellar. The building above the grade is covered with white cedar shingles and is left to weather-finish. The trimmings are painted a cream color and the posts to the piazza are painted dull brown.

The plan is in the form of a U-shaped house, with a main building, at either end of which is a wing, between which wings is built the patio or open court. This court, while different from the patio in its origin, affords nearly all the privacy and comforts offered by

the enclosed court and at the same time permits a free use of plants and shrubs. The patio is an interesting feature for the bungalow, for the brief simplicity of a typical bungalow often prevents freedom of outdoor life, and the patio is most appreciated, for it offers a place for outdoor lounging in strict privacy.

The entrance to the house is into a great living-hall, in which are the stairs to the second story; for there is no "rear" hall. This great hall is the center of the life of the house, from which all the rooms open and from which French windows permit of ready access to the patio. It is trimmed with oak, finished in Flemish style. The ceiling is beamed, and the open fireplace is built of buff brick, with facings rising to the ceiling. The simplicity of the hall harmonizes well with the Mission furniture with which it is furnished.

The reception room to the left and the library are conveniently placed, and are finished in a handsome manner.

The dining-room is treated with a cream, green and bronze effect. The walls are paneled with paintings of fruits and flowers. The open fireplace has a marble mantel. The sun-room, adjoining the dining-room, is used



A Porch Surrounds Three Sides of the Bungalow



The Patio, with Its Doric Columns and Its Grecian Table, Overlooks the Shrewsbury River

for dining uses when desired. The main dining-room opens into the patio. The remainder of the plan at the right side of the house contains a suite of three well-fitted up bedrooms, and a bathroom furnished with porcelain fixtures and exposed plumbing.

The second floor contains the servants' rooms and store room. The cellar contains a steam-heating apparatus, fuel rooms, store room, laundry, kitchen and servants' hall, all fitted up complete with all the best appointments.

Stepping from the living-room to the patio, one finds a temple-like structure, formed by Doric columns supporting beams and cross-beams, on top of which there is placed rustic work. The three wall sides of the court are covered with a latticed trellis, on



A Clean Cut Trim and Mission Furniture Make a Good Style for a Bungalow



The Dining-room Walls Are Paneled with Paintings of Fruits and Flowers

which vines are now growing close in front of the beds placed along the sides of the house. Vines are also clambering up around the columns which form the temple-like structure.

A Roman table of marble with carved standards stands in the center of the court. Stepping down from the patio, a short walk leads to the formal garden on the banks of the Shrewsbury, which is laid out in a formal manner, and is planted with both perennials and annuals. A sun-dial and terra cotta pots ornament the walks of the garden.

The use of plants as an edging or border to the flower-beds doubles its blooming capacity and, when the area of one's garden is restricted, is of value from an economic as well as from an esthetic point of view.

There are few, if any, beds but what are improved by the addition of some low growing plant around the edge, bringing the flower-bed into closer relation with the sod, without

any intervening strip of bare soil. If a plant that gives bloom is in harmony with the taller occupant of the bed, so much the better. This is what the gardener has evidently tried to do in this particular case, and though the illustrations show a very slow growth, it is what is ultimately intended to be.

In selecting plants for the beds laid out in a formal manner much consideration has been given to the grouping of the masses of flowers and their relation to each other. Blend only two colors together and only those that are harmonious. One mass of color is often better than two colors blended.

On the whole, then, and indeed in a very marked way, this is a house of interesting originality. It is completely adapted to its site, not over large in size, yet entirely

ample for the demands made upon it for the accommodation of the owner, and environed in a thoroughly charming manner.



Steps Lead to the Patio with Its Balustrade Enclosure



The Summer Veranda

By Esther Singleton



WITHIN the past few years the veranda has come to mean something more than its dictionary definition—"a kind of open portico formed by extending a sloping roof beyond the main building." Built of ample or cosy proportions, supported by columns, inclosed by a stone or wooden balustrade or framed in by flower boxes, decorated with ornamental plants or bright blooms in jars or baskets, protected from the sun by striped awnings or grass or bamboo curtains, and made comfortable with easy chairs, tables, rugs, and cushions, it has become a most important feature of the American summer home.

In this country, where the tall, thick, and glistening hedges of holly, box, yew, and hawthorn and the high brick walls, which so delightfully screen one's premises from the gaze of the world, are almost unknown, it is impossible to live upon one's lawn in privacy. The veranda offers a compromise between in-

doors and outdoors, and has developed into a species of open-air room the furnishing of which is quite as important as that of any other room in the house.

In our Southern States the delights and uses of the veranda have long been known. The visitor to Charleston, Savannah, New Orleans, and other cities (where, by the way it is often referred to as the "gallery" or the front or back "po'ch"), one is astonished to find not only every house, but every floor of the house supplied with a veranda extending

around its three or four sides, as the case may be, and screened from the public eye by shutters, the small slats of which are opened to admit air and light. Here, in warm weather, the inhabitants not only sit and eat, but frequently sleep as well.

These Southern verandas are not, however, as a rule, furnished with any eye to decorative effect; it is in the more wealthy States of the North that the veranda is found in its glory. In the homes of millionaires it sometimes exhibits not only luxurious but ex-



1—Bamboo Screens Are Both Popular and Useful in the Modern Veranda



2—The Increased Use of Verandas as Sitting- and Dining-rooms Requires Ample Areas



3—The Tea Cart Has a Special Usefulness in the Porch Dining-room

tremely tasteful furnishings; in simpler homes of wealth and fashion it is often both correctly and attractively arranged; while, again, in more modest cottages and villas it is frequently bright and cosy. But in any shape the veranda is a welcome addition, and can be as charming as it is useful.

Take, for example, Nos. 1, 2, and 7 of the accompanying illustrations, which are not beyond the reach of the ordinary affluent pocketbook. No. 1 would be more attractive if it were supplied with a balustrade to give a sense of security and cosiness; but this defect is in a measure remedied when the bamboo curtains are dropped. The rug, tables, chairs, and potted plants render this a very homelike retreat.

No. 2, from a house at Atlantic Highlands, is more elaborate. It is both spacious and cosy, making one long to lounge in one of the easy chairs idly gazing across the sea, or, still better, to dream away the starry summer night.

No. 7, perched high above a beautiful landscape of rolling hills, is securely framed in by a stone balustrade adorned with potted plants and creepers. The long bench below the window is plentifully supplied with cushions, and an electric bulb furnishes light when needed.

No. 6 is very pleasing, not only on account of its proportions, but its floral adornment. The long boxes contain masses of blossoms, and are kept filled with seasonable flowers. We are beginning to appreciate what beautiful effects can be produced by the simplest garden flowers when arranged in masses—a blaze of red, a mist of blue, or a

gleam of yellow to give delight to the eye.

Although this is the entrance to a somewhat modest home, yet the arrangement is a little more formal than our other examples.

A cosy little nook, which speaks for itself, appears as No. 5. A pretty effect is gained by the flower beds leading down to the low stone wall.

Many country homes are now supplied with a separate veranda that is used for a breakfast-room. Indeed there is no more delightful way of beginning the day than by having your first meal in the open air with the birds singing around you and glimpses of blue sky and golden green stretches of lawn through the waving trees. At first a fad and fancy, the veranda breakfast is now almost a necessity. The suburbanite now enjoys this reposeful meal as long



4—A Double Veranda, the Inner Part Enclosed Within Doors and Screens, the Outer of the Usual Type



5—The Paths' and Flowers' Without the Veranda Add Greatly to Its Beauty and Are a Part of Its Decoration



6—Long Boxes Filled with Masses of Bloom Add Greatly to the Beauty of this Porch



7—A Long Bench, Plentifully Supplied with Cushions, Greatly Increases the Seating Capacity of the Veranda

glass and shut in with screens and through the glass doors we see the outer veranda, also equipped with chairs. This arrangement is somewhat novel.

The veranda is one of the most important features to be considered in the planning of a summer home. The placing of it is very important, for the reason that it should be placed in such a manner as to insure privacy and at the same time permit the securing of the most interesting views, whether it be mountain landscape or marine. Another important factor is for it to be placed on the side of the house which receives the prevailing winds. The summer veranda is after all the main living quarters of the summer home.

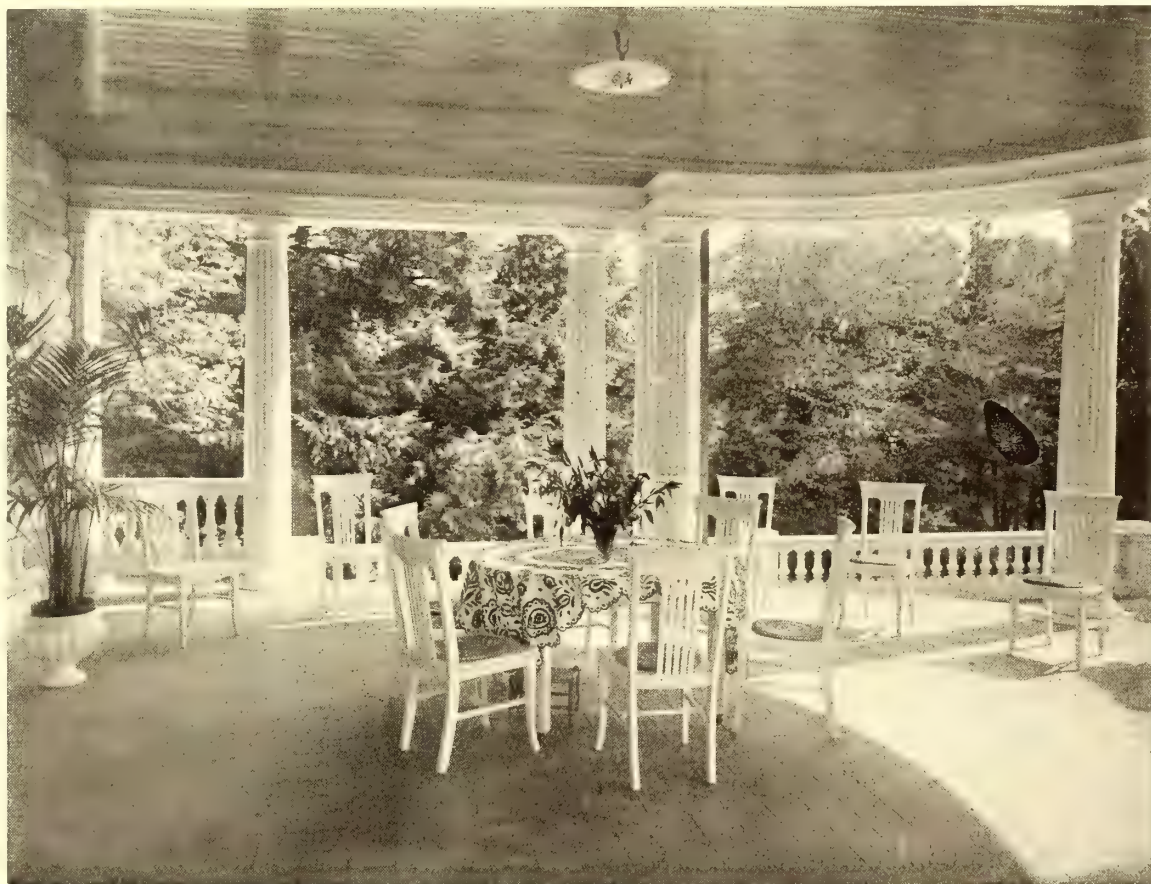
It should be furnished with light airy furnishings, wicker furniture being preferable, and if any of the chairs are to be upholstered they should have adjustable cushions which can be taken in at night, where a piazza is open to the elements, and can be placed in the sunshine after a damp, foggy season.

as he can, before his wild dash for the train, as well as the country gentleman of leisure, who goes to town when it pleases him.

High tea on the veranda is nearly as delightful as breakfast, and is often served in simple as well as fashionable homes. Of course, the veranda for meals has to be situated near the dining-room and butler's pantry for convenience of service. A door usually communicates with the dining-room. A spacious veranda of this type appears as No. 8, with table and chairs.

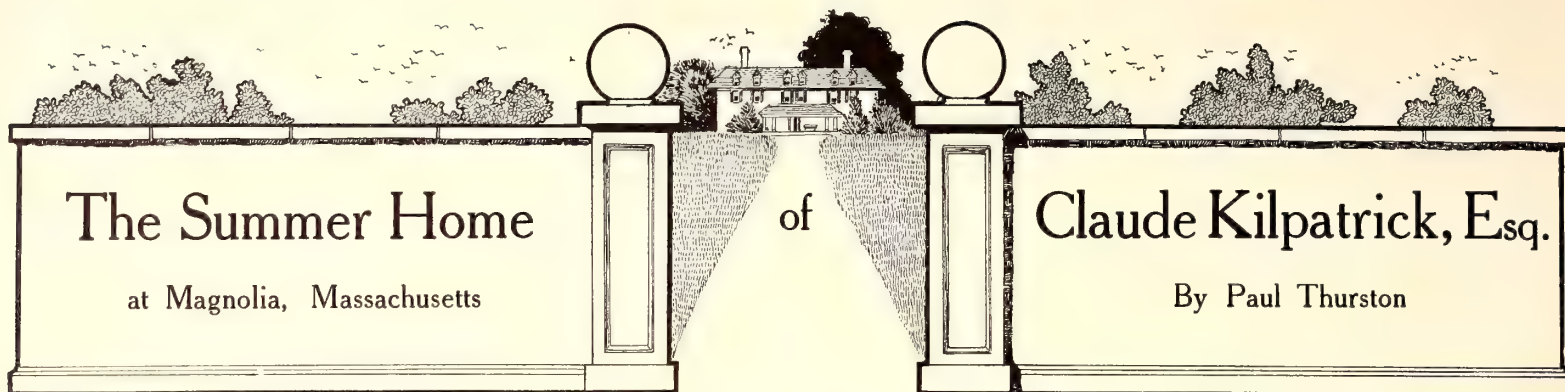
No. 3 is also adjacent to the dining-room. A Mexican rug lies on the floor, and there is a tea-cart for service. This veranda could easily be inclosed in glass in the winter and used as a conservatory.

A double veranda is shown in No. 4. This is inclosed in



8—Ornamental Supports and Enclosures Add Much to the Beauty of the Veranda





R. KILPATRICK'S house, which is illustrated on pages 184 and 185, may be taken as a type of the summer home adapted for use throughout the year. The structure is a combination of stone, stucco, and shingle work. The first story and piazza wall and piers are built of rock-faced stone; the gable-end over the entrance and the chimney are of stucco, colored a silver-gray; and the other parts are of wood, covered with shingles stained a soft brown. The trimmings are painted Italian green and the shingled roof is stained with a brilliant red.

The entrance is on the side, so as to permit the arrangement of the principal living-rooms on the ocean front. The entrance corridor leads to a staircase hall, both of which are trimmed with quartered oak and are paneled to the ceiling, which is beamed, with deep panels. The staircase is arranged in a semicircular bay window, lighted by a cluster of leaded glass windows. The stairs have broad steps and a newel formed of a cluster of balusters.

Mr. Kilpatrick's den is on the left of the entrance. It is trimmed with cypress washed with green stain. It has an open fireplace with red brick facings and hearth. On either side is a cluster of windows, beneath which are paneled seats. The morning-room is on the right, and is treated with white enamel. The walls are ornamented in the Empire style, in white and green. The open fireplace has facings and hearth of white enamel tiling, and the mantel is in harmony with the general style of the room.

The living-room opens from the staircase hall. The woodwork, which

includes a low paneled wainscoting, is treated with yellowish gray, while the upper walls are finished with a forest effect. The ceiling is supported on a wooden cornice. The fireplace has facings and hearth of Roman brick. The mantel-shelf is supported on carved corbels, and the over-mantel is paneled with pilasters.

The blue-gray paint of the dining-room harmonizes well with the striped green and white paper with which the walls are covered. The room has a low paneled wainscot and a cornice of wood. The open fireplace has marble facings and hearth and a paneled over-mantel. Opening from one corner is the sun-room, octagonal in plan and inclosed with glass. The butler's pantry, kitchen, laundry, pantry, and service entrance are all supplied with the best modern conveniences.

The second story contains five bedrooms and two bathrooms. Each of the former has its distinctive color, and the bathrooms have tiled floors and walls and porcelain fixtures and exposed plumbing. The servants' bedrooms and bathroom are on the third floor, on which ample storage space is also provided.

The heating apparatus, fuel rooms, and cold storage space are in the cellar. Mr. James S. Lee, of Boston, was the architect.

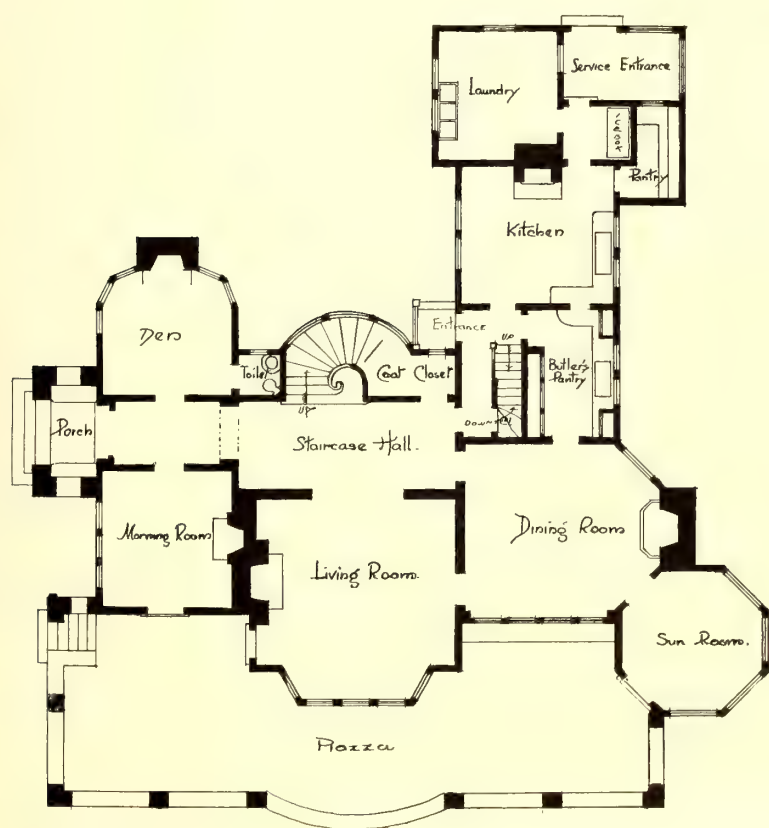
The leading idea throughout the construction of the house was to spend no money on things not essential to the comfort of the owner's family, but to spend all that was demanded to make a house of thorough construction and good appearance. The plans show it, the elevations show it, and the interior with its decorations and furnishings show it. Mr. Lee has been very successful in carrying out Mr. Kilpatrick's idea in this direction.



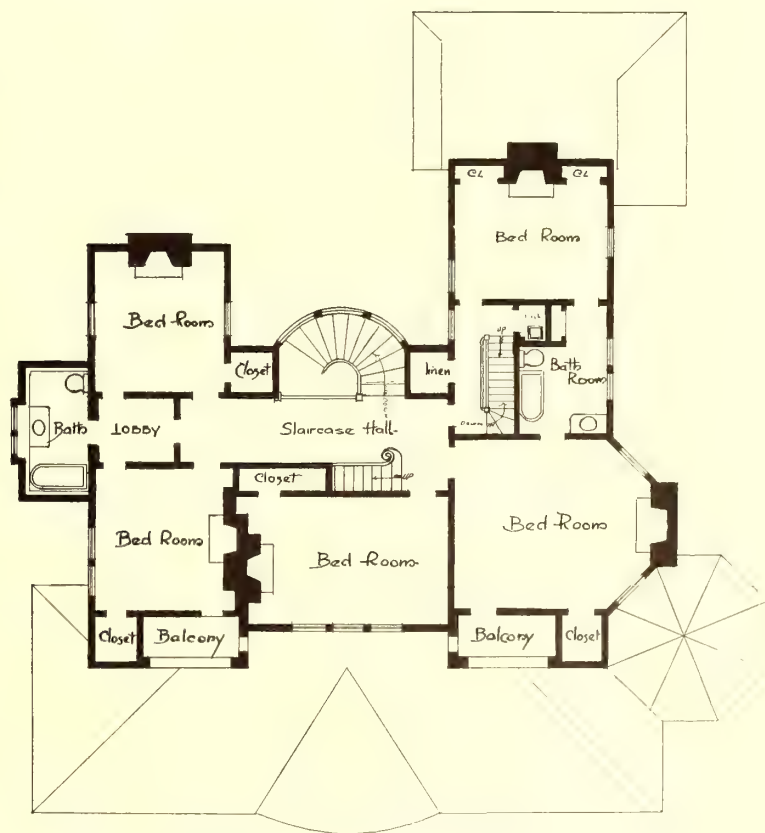
An Entrance on the Side Leaves the Main Front Free for the Living-rooms



In Mr. Claude Kilpatrick's House the Chief Rooms Overlook the Ocean



FIRST FLOOR.



SECOND FLOOR



Green Striped Paper and Blue-gray Woodwork Constitute the Decorative Elements of the Dining-room



The Living-room Is Finished with Yellowish Gray Woodwork and a Forest Design for the Walls



A Scotch Madras in Persian Design

Artistic Curtains and Portières for the Summer Home

By Mabel Tuke Priestman



A New Idea: Burnt Work on Velvet

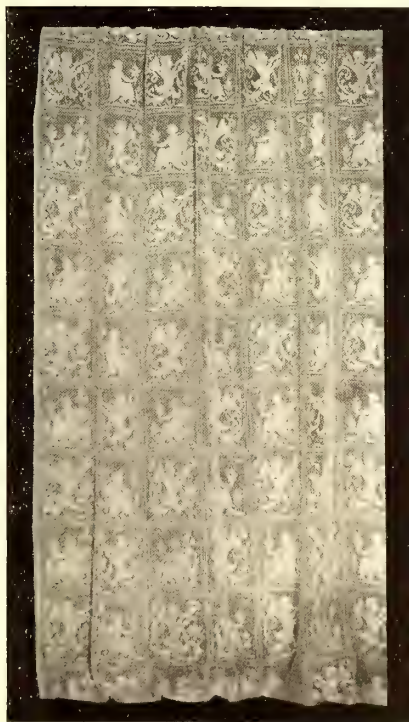
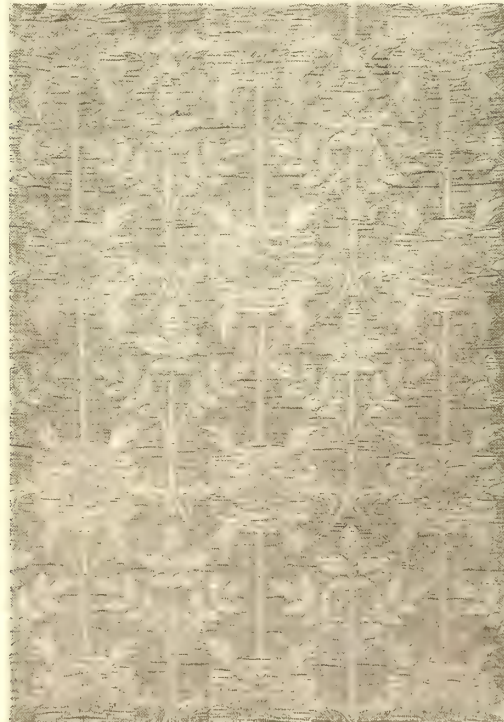


THE perplexing question of what to buy for curtains and portières confronts every householder, and when there are so many beautiful things to choose from there is no reason why we should not get really pretty draperies without an undue amount of expenditure. The trouble is, the majority do not know what can be found by looking for it, or what can be evolved by their own ingenuity. Among the piles of sheer draperies for sash curtains we find a splendid variety, and the old stand-bys of swiss, madras, and fishnet are as much sought after as ever.

Few things improve or stamp a house so much as the

choice of suitable sash curtains. It is therefore most important that we give a great deal of thought to this subject. In a house in the country which has a good deal of white paint, white swiss curtains, plain or dotted, are a wise selection. These should be well made, of fine quality of swiss, and with careful laundering should last for five or six years. The very cheap coarse swiss sash curtains wear out after one or two washings so that they are the most expensive in the end.

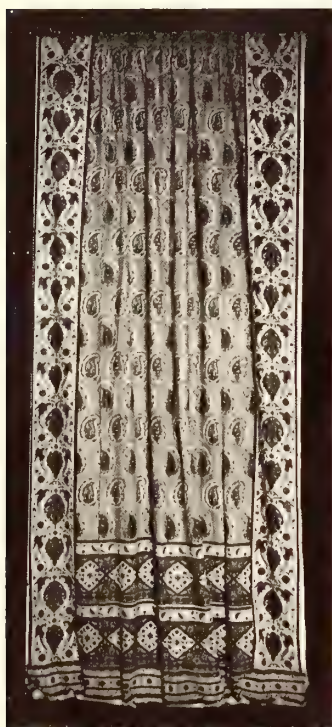
Bobinet is another suitable material, and for the white painted house white is the best choice. It also comes in cream and coffee color. The latter is to be recommended

An Improvised Portière
Readily ArrangedA New Fishnet Suitable for the
Hall or Living-roomHelena Tapestry, a Good Portière
Fabric

for the city house, which has dark paint and stone walls. The chief advantage of bobinet is that the mesh is so open it lets in plenty of light. The ready-made bobinet curtains are the best to get, as they can be bought from five to fifty dollars a pair, in every quality of bobinet, trimmed with cheap imitation torchion or hand-made lace. In buying ready-made curtains get them several inches longer than the window requires, and turn in two or three folds at the top. Bobinet shrinks considerably, and as it wears well it will of necessity have to be laundered a good many times. If the top hem is sewn by hand it can be adjusted each time to the window. How often one notices pretty bobinet curtains six or eight inches too short for the window, which could have been so easily obviated by the hem at the top being adjustable. These curtains are usually trimmed with renaissance, cluny, or torchion lace,

up very little. They come in white, cream, and ecru, while they may also be found on black, cream, or green grounds with flowers of various colors and make a most artistic drapery. Our illustration shows a Persian design in soft tans and reds, which would be suitable for any sitting-room, especially in connection with Eastern rugs. Curtains of this kind are better sent to a dry cleaner's. If the home-maker has them constantly shaken they will last a couple of years without being cleaned. These are only some of the many nets to be found in the stores to-day. Nainsook, dimity, grenadine, point d'esprit, and cheese-cloth can all be utilized as occasion offers.

We have even more variety for the inner curtains in the chintz, taffetas, Java prints, Japanese cottons, India prints, Dutch prints, denims, art tickings, velours, and velvets, which are always available. Individuality can be given



A Java Print, Often of Gay Colors



A Simple Window Treatment with White Swiss, Blue Denim and White Paint

but new varieties are found in appliqué.

Our illustration shows three styles of curtains with different designs of white braid, the edge only being outlined with lace. Where long curtains instead of sash curtains are preferred they

will be particularly suitable, as the inner curtain would fall over the plain part, leaving a chased little border coming beyond the heavy drapery. Bobinet curtains can also be stenciled. A very effective touch can be given to the room by the predominating colors being suggested in the curtain.

Old-fashioned scrim has come back to stay, and is of service when we need to be protected from the passerby, the mesh being quite close and therefore affording an excellent screen. A year or two ago fishnets seemed to be a thing of the past, but the last two seasons a wonderful variety have been forthcoming. Except for their name they are a new curtain, as instead of just a variety in mesh they come in all kinds of designs. Our illustration shows one of the new fishnets in cream with a design appropriate for hall or living-room. Some of the designs have geometrical wheels and are very open, and fill a long-felt want, as they can be used where a swiss or bobinet would seem out of place.

The soft dainty folds of madras give refinement and repose to sitting-room or bedroom alike, and are especially suitable when the entire house is curtained with one material. It is very economical, as they keep clean a long time and when they are laundered need no starching, and wash

to the home by the right and appropriate use of any of this long list of materials.

Suppose we have a bedroom papered with a flowered paper and want to have our curtains to match. An inexpensive cretonne, a yard wide, can be used for the body of the curtain, while a heavy border five or six inches wide, of green denim or art ticking, would add interest to such a curtain. The join of the plain material and the figured can either be hidden by a heavy cord or it can be cut out like the curtain in our illustration. The design is defined by a narrow cotton cord sewn on to the edge by machine.

The prettiest way to curtain a room papered with figured paper is to use a plain curtain with a small appliqué border repeating the colors of the wall paper. The appliqué can be cut out of linen or denim and applied to the solid surface, and can be finished off with couching, embroidery, or a narrow cord.

A very charming way of making bedroom curtains is to leave them untrimmed, with the finish of a valance running across the top of the window and beyond the curtains. This valance softens the light, and when several windows are in the room gives a very artistic appearance. Some of the strongly colored cretonnes are particularly attractive for this purpose and are prettier unlined, as the effect of the light filtering through the curtain is by no means a disadvantage.



A Plain Border with Appliqué Finish

The draperies for the downstairs rooms require more thought and care. Portières lined or interlined of velour, velvetine, or silk tapestry are always in good taste and appropriate for a handsomely furnished room, or for the simplest style of decoration. If the walls are figured it is best to have the relief of plain hangings and vice versa.

The crinkled tapestry is one of the newer fabrics, and is sometimes shot with another color, giving an iridescent effect which is very pleasing. The hardest thing to find is an inexpensive drapery heavy enough for a portière which does not require lining. Arras cloth or craftsmen's canvas, as it is sometimes called, is one of the new materials, and comes in a wide range of colors, from deep pomegranate red to soft ecru. This material resembles burlap, and is made of linen and jute. As these materials take the dye differently, there is a charming play of surface color which adds very much to its attractive qualities for a drapery. It is heavy enough not to require lining, but is improved by the addition of a tapestry border on the hem line. It is not so suitable for curtains as it is for portières and couch covers, as it needs to be protected from the sun's rays to keep it from fading. When used as a portière cover, it holds its color well. It is especially suitable for rooms furnished in the modern style of mission furniture, as there is something quaintly barbaric about its rough texture.

Another attractive material, which is, however, very little known, is the Helena tapestry, an imported material made in Scotland, varying in price from three dollars to four and a half dollars a yard. It is made of a double weave of silk and mercerized cotton, and is one of the most beautiful and artistic draperies to be found in this country. It comes in every shade and in quaint designs, these being strong and English in their character. The surface is slightly raised and crinkled; while some of them have several color combinations, the majority are two-toned and shot with a contrasting shade. The Helena tapestry in our illustration is of two shades of green, while the shot of blue which predominates makes the curtain blue in some lights. This material needs searching for, as only the best stores have these tapestries, but they can be obtained if you insist on having what you want, and by not being put off with some makeshift which the salesman wants to get rid of.

For a girl's or boy's bedroom or a den what would be more appropriate than a Java print? They can be had in delft blues on a white ground or on a coffee-color ground with warm reds and blues introduced in the design. They have borders on two sides, while the bottom is usually finished off with a dado. Our illustration shows a very pretty one in tones of pure gold, while splashes of red add strength to the curtain. These are very suitable for summer portières and for all-year-round curtains. With plain wall

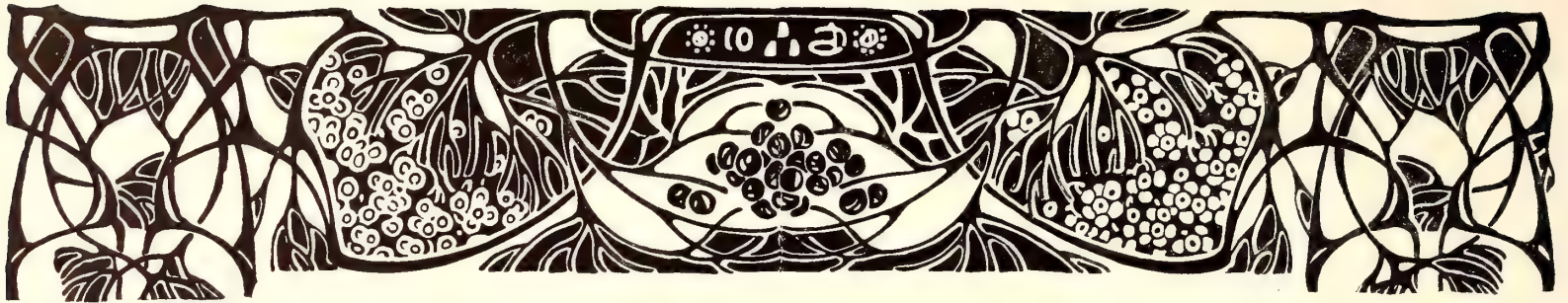
papers and mission furniture, beautiful color effects can be obtained, and it seems remarkable that so few people know of their existence. They are printed by hand by the women of Java, and can be obtained at Oriental stores. In the upholstery department can be found couch covers and table cloths. Among the latter suitable curtains can sometimes be found.

Our illustration shows a cotton blue and white table cover which answered splendidly for a portière in a delft dining-room. As a table cloth I think it would be hideous, but used as a drapery it is appropriate and inexpensive, costing only two and a half dollars and requiring no making. They come in blue and white, green and white, and red and white, and the "Made in Germany" ticket is usually seen on them. Sometimes the dress counters have simple materials which can be utilized for curtains. Quaint checked gingham and turkey-red twill suggest all kinds of possibilities for strong treatment, while Rajah cloth and Danish cloth in ivory make the most charming inner curtains for bedrooms; in fact, the Rajah cloth can be used in place of Shikii silk, as it has much the same effect. For a handsomely furnished room nothing can exceed the beauty of heavy Shikii silk at one dollar and eighty cents a yard for sash curtains in ivory, while the inner sash curtains in the various colors are most beautiful, but should have the protection of a net on the glass, as any colored silk would fade if exposed directly to the rays of the sun, however good the quality. With this slight protection inner sash curtains of green or blue Shikii silk will last for years. They should be made to slip easily on small rods with brass rings, as they are much prettier when drawn at night than a lowered shade would be.

Upholsterer's velvet is such an old favorite that I need not say much in its praise. There is, however, a finer, more silky cotton velvet on the market which comes in a wide range of colors. I have seen these in very artistic homes, with a small design burned on them. The effect of brown on brown, red on brown, and brown on green is indescribably beautiful, and with fitting surroundings are distinctly original. Our illustration shows a plush curtain with a printed design outlined in brown on three sides. This only faintly suggests what I want to convey in describing the velvet curtain with a burnt design. They are used for portières, inner sash curtains, and long curtains.

The successful curtaining of our home is, after all, a question of taste. The knowledge of good color value goes much further than a large pocketbook in bringing about the desired results. Our illustration shows a pretty window furnished only with dotted swiss, and yet who would want a prettier recessed window than this, obtained with the use of white paint, blue denim, and white swiss? Surely nothing could be simpler, and I doubt if anything could be better.





Testing the Courage of a Bobolink

By Ned Dearborn



THE most fundamental instinct in the entire animal kingdom is parental devotion. It is not surprising, therefore, that nothing kindles our admiration more quickly or excites our sympathies more profoundly than the cares and distresses incident to the rearing of young. Nevertheless, a private interest sometimes induces one to turn this inherent trait to his own advantage. Many an animal has faced and met death while protecting its progeny. Hunters make the capture of their quarry certain when they discover its young. The deplorable slaughter of white herons, which has almost exterminated those beautiful birds in our country, is an example of this sort of hunting. How the heronies were invaded, how the birds were shot down by untold thousands at these breeding places, how the young egrets starved in consequence—the whole brutal story has been so widely rehearsed by friends of birds that American women have renounced the beautiful *aigrette* out of sheer horror and indignation.

The plume hunters have turned their energies into other channels and left the haunts of birds to those who study them, and confessedly bother them, but who by gentle measures allay their fears, gain their confidence and learn their secrets. After an observer has watched them at arm's length and seen with what patience, thoroughness and fidelity they attend to their natural duties, he finds his conceptions of bird-life vastly broadened. He witnesses many things he never dreamed of. He gets at their instincts and their nervous qualities in a new light, which delights and fascinates and instructs him. He sees exemplified so many of his own best traits, and it is not surprising that his imagination sometimes

outruns nature and gives to the birds of popular literature human qualities which those of the field do not possess.

The accompanying illustrations depict as real a hero as was ever embodied. He endured what appeared to be a very grave peril that his children might not suffer from hunger. Parental instinct impelled him to feed those young birds on the day they hatched from the shell, but if on that day or the next, a tent had been pitched within twenty inches of the nest, it is altogether probable that fear of it would have caused both of the parents to desert their home and leave their young to die. But as their nestlings grew, so increased their affection, yet not equally as to the sexes, for even at the climax of parental devotion, which occurs when the young birds are ready to fly, the timid mother, in the hour of trial, lacked courage to come and feed them. But not so with her mate. The making of these pictures was incidental to a study of the food habits of bobolinks—one of many similar studies with different kinds of birds, all of which depended for their success on the power of parental solicitude to overcome an ordinarily prevailing fear.

The usual course of events in these investigations consists in pitching a small tent so close to a bird's nest that every act within it can be distinctly seen by the observer stationed within. In this instance the nest was deserted by the young bobolinks a few hours before operations began, so the problem was somewhat out of the common run. As the proverbial recipe for rabbit-stew begins with catching the rabbit, so here the capture of the little birds was first in order. The tent was erected near the deserted nest—an intrusion which worried both of the old bobolinks very much. As soon as the author of their anxiety disappeared inside his tent, they



The Male Bobolink Brought Soft-bodied Grasshoppers and Katydid



Appetite Was a Good Instructor



His Black and White Nuptial Suit Was Already
Being Replaced by One of Gray

became quiet; but they made him wait with one eye at a peep-hole for thirty minutes before feeding a single birdling. The spot where the first young bird was located was carefully noted and approached at once, yet so closely did his colors blend with those of the newly mown stubble about him that

and swallowed, the old bird fell to pecking violently at the wires in an attempt to get them out of his way. He was no longer afraid of the cage. Another grasshopper was brought almost immediately. Again the old bird fought the cage, fought it to his satisfaction, for he never afterward questioned its resistance.

Subsequently he came and went with perfect freedom, regardless of the fact that during each absence the cage was brought a little nearer the tent, and ultimately rested within twenty inches of it. The tent had ceased to worry him, however, and even prior to this time he had formed the habit of alighting upon its ridge pole whenever he returned from a trip to the meadows. He evidently considered the tough red-legged locusts, which were common about the tent, improper food for young stomachs, for he always left this locality on his foraging trips and brought soft-bodied meadow grasshoppers and katydids from distant points. The mother bird brought grasshoppers, too, but her fear was never sufficiently reduced for her quite to reach the cage. There were other birdlings still at large, and to these she presently devoted her entire attention. In other similar tests with bobolinks it invariably has been the male who came to feed the little ones. Females of other species of birds are often braver than their mates. At nightfall the cage was covered with a cloth and taken to a neighboring house for safety. Shortly after sunrise the following morning it was carried back to the tent.



The Tent Had Ceased to
Worry Him



The Colors of the Young Blend
with the Newly Mown Stubble



The Male's Apprehension Shown by the Convulsive
Movements of the Wings and Tail

it was only after a diligent scrutiny of the place that he was discovered. Forty-five minutes later a second little captive was added to the first. Both were now put into a cage which was placed on the ground about a rod from the tent.

At first the old birds were in great distress, the male in his excitement frequently breaking out with snatches of song, although it was then so late in the summer that his normal season of song was a month passed, and his black and white nuptial suit was already being replaced by one of sober gray. Agitated humans not unfrequently say and do things out of season. In a little while they settled down on some tall weeds that stood near by and silently awaited developments. After a time they disappeared, presumably resigned to the new state of affairs, for the cage had been out only eighteen minutes when the old male was seen approaching it with a grasshopper crosswise in his bill. He was plainly afraid of the cage, and no wonder, yet his desire to feed his babies gradually got the better of his fear, and each round brought him a little nearer. It was most interesting to watch his movements while subjected to these conflicting impulses. Approach and retreat, approach and retreat, over and over again. In two minutes the struggle was ended. Devotion conquered. He had to push his grasshopper between the wires several times before the little ones discovered that they also must come up to the wires if they were to receive food. But appetite was a good instructor and they soon learned what to do. When the grasshopper had been duly delivered

The devoted father recognized it at a distance and came out to meet it singing as if at his wedding.

As the cage had become commonplace to him by this time,



He Crept Up to It

it was decided to give his courage a severe trial. After all concerned had breakfasted, the young birds were transferred to a tin-pail set in a hole in the ground so that its rim was

flush with the turf. The old fellow evidently had a great dread of going into the pail; it was so deep and shiny and so unlike anything with which he was familiar. He crept up to it and around it, and looked down into it; he shrugged his shoulders and jerked his tail many times before he finally mustered enough courage to jump down and feed his babies. Yet, after all, it was but a matter of a short interval, the

At no time did the young birds appear distressed by their captivity. They did not beat themselves against the wires of the cage or make any frantic endeavors to escape from the pail. They preened their feathers, stretched and slept in turn contentedly. They never became hungry enough to chirp except in answer to the interrogatory *pink* uttered by the old bird from the top of the tent each time he arrived



A Final Portrait of a Young One

conquering of this new fear—about twenty minutes. It would have been easy to have trapped him in that pail, and he seemed to realize his danger. The convulsive movements of his wings and tail, as he stood on the rim preparatory to entering, told plainly of his apprehension.



Within the Pail He Exhibited No Sign of Trepidation

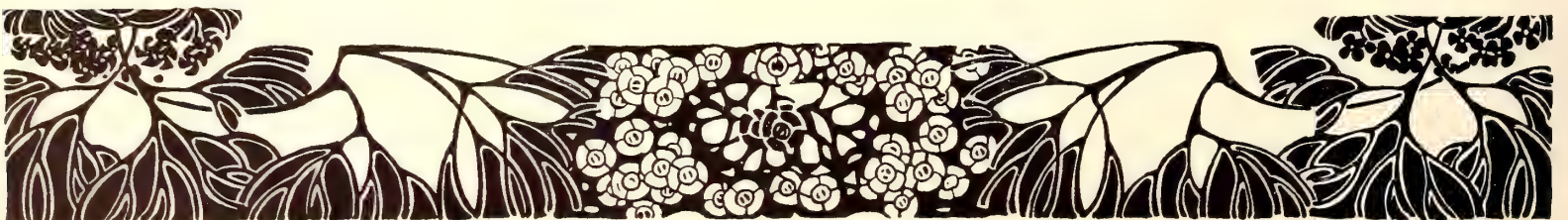
with his provisions. It was plain parental duty, not a paroxysm of anguish, that made a hero of this bobolink. Within the pail he exhibited no sign of trepidation, but offered his grasshoppers as calmly and directly as if it were his chosen home, and left it without show of haste. When the experiment was eventually finished the captives were taken out and restored to freedom, but not before a final portrait of one of them was made to complete the evidence of the tractability of bobolinks, a protrait which is here reproduced and which may be considered substantiation of the author's contentions.

Cultivated Chestnuts



AS AN ornamental tree, the chestnut, when given plenty of room, is very handsome, and where the yard or lawn space is ample, a few of these trees will produce a very pleasing and attractive effect. As a forest tree, to plant for the wood, where the land is cheap enough to admit of it, and the planter realizes that he will have to wait for a number of years for his first returns from the wood, the chestnut is a desirable sort of a tree to plant, as it is of fairly rapid growth. Where the fruit, or rather nuts, are the desired quality, the sorts and kind planted do not go to wood quite so rapidly as do the common Sweet American Chestnut, though the return from the nuts far more than make up any loss from that condition. A grove of one or two acres or more of grafted or budded chestnut trees will soon produce a very substantial crop, in fact some of the trees produce a few nuts the second year after planting and then

in increasing quantities each year thereafter, though for the health of the trees and to induce a vigorous growth the first few years at least, it is best to remove the nut clusters when formed, and not permit the trees to bear until the third year. Any land which will produce good corn will be suitable for planting the chestnut. They should be planted in the early spring, and from twenty to twenty-five feet apart, the land being cultivated in vegetables for the first two or three years—but never wheat, oats, or grass—so as to insure the ground being well tilled, well fertilized, and a fair share of protection be given to the land by the leaves of the growing crops. The land can then be put down to clover for a couple of years, when it should again be cultivated for two or three seasons, thus getting returns from the same piece while the trees are coming into profitable bearing. One of the very best sorts of cultivated chestnut is the Alpha, which is a medium-to-large nut, a regular cropper, and brings the highest price.



LOWESTOFT ARMORIAL CHINA.

By N. HUDSON MOORE.



Lowestoft China with Blue and Gold Decoration



HERE are few chapters in the history of pottery and porcelain more interesting than that which deals with the ware once known as Lowestoft. It is safe to say that no one subject of interest to collectors has ever produced such acrimonious discussion, nor caused such lengthy disputes. The misty character of the information at hand caused a glamour to surround this ware, which is pretty enough in itself to make it popular, and which, under the title of "Armorial China," is having quite a revived vogue. This present interest is derived from a new source, but of that later; the early history should have the precedence.

In and near Boston, at Salem and the surrounding towns, and up the valley of the Connecticut, for more than fifty years the "best china" of notable housekeepers was of a bluish gray, hard paste, with a pitted glaze and uneven surface quite Oriental in character, though the decoration was of an English type. What our great grandmothers called this china I have never heard—"Best Chaney," most likely,

or "sprigged pattern" for some styles of it, for the various patterns can be classed under three heads: first, that having armorial devices in one or more colors; second, that having bunches of flowers in bright colors, with borders of lines, dots, or bands; and, third, that which has bands of dark blue with stars, dots, or small patterns in gold upon them.

It is only within recent years that the name "Lowestoft" has been applied to this china, and the whole theory was built up by Mr. William Chaffers, the gifted author of "Marks and Monograms," who took this style of china under his particular protection. For nearly fifty years his cleverly woven patch-work of fact and fiction remained comparatively undisputed. According to facts there was a pottery at Lowestoft in operation from 1756 till 1803. But to this factory, which was a small one, Mr. Chaffers ascribed an output greater than that of almost all the other English factories put together. The situation of Lowestoft, its nearness to other potteries, all of which were making soft-paste porcelain with blue and white decoration, would seem to indicate that the ware made there would be of similar character.

So late discoveries have proved, for within the past two years molds and specimens of porcelain have been discovered which are exactly what might have been expected. Simple shapes, soft-paste porcelain, polychrome or plain blue decoration.

In this article, however, we are dealing with that ware which for so many years delighted the collector's heart under the name of Lowestoft, and which was hard porcelain, Oriental in character, but charmingly decorated. It is the variety



I—Bowls and Tea-Caddy



2—Punch Bowl and Table Service

with the armorial decoration which is most sought now, and though the heraldic decorations to be found in this country are distinctly less ornate than those found in England, still enough are to be met with here to keep the student of heraldry quite busy in order to decipher the devices.

It was the fashion during the whole of the eighteenth century to ornament household belongings with coats-of-arms, as may be seen on the splendid old silverware of the times. The china followed suit, and nearly every ship of the East India Trading Company, the Dutch East India Company, and the stout ships which went "round the Horn" from our own seaports, carried patterns to the Orient. Not only this, they no doubt carried examples of English pottery, of Staffordshire as well as of choicer makes, so that the Chinese artist could copy in his own fashion the style of work in vogue at the time in England. Very charmingly, too, did the Celestial artist treat these little sprigs and

that decoration known as the "grain of rice." It looks like a row of rice grains set end to end, and very frequently is red in color. I have a small bowl decorated on the outside with grain of rice, and on the inner edge with an elaborate arrangement of dots in festoons, in every alternate one of which is a bunch of roses.

All the decoration of this Armorial or Lowestoft china is over-glaze, hence it wears off with much use; you can see in Fig. 1 that it is indistinct in places. The gold which was used seems to have been of poor quality, and that always wears off first. It is sometimes a matter of speculation why, when such large quantities of this china were sent to England and America, none without decoration is to be found. The explanation is simple. All undecorated china brought from the East into England between the years 1775 and 1800 was taxed, and these were the years when this style of china was at its greatest popularity.

The tea-caddy in Fig. 1 shows fluted sides and a slight decoration in monochrome. The cover is wanting, but it was no doubt of the usual pattern, with either the rough nut or the little seated dog on top. These knobs never seem to have varied in design. The tea-caddies are always small pretty little affairs, very often standing in a small tray with decoration to match. The price of tea was so great that the receptacles for holding it were made very small. It was on sale in Boston by 1690, and in the next year it could be procured at four tea-houses. It was advertised for sale in



3—Cup and Chocolate Pot

bunches of flowers, and never, till you begin to collect, will you guess the variations which may be rung on the theme of a rose, two leaves, and three unnamed little posies.

Besides all the services which were decorated to order with individual devices, there seem to have been certain "stock patterns" which could be used when only initials were wanted. The commonest of these were a shield on which the entwined initials were placed, the whole design being surmounted by two birds billing. A vine in red or green accompanies this pattern, and sometimes the two colors are combined, or black or brown may be used. Sometimes instead of the vine the pattern which is used as an edging is



4—Platter with "Sprigged" Pattern



5—Punch Bowl with Schooner Flying the English Flag

the Boston "New's Letter" in 1712, and milliners, apothecaries, snuff and drygoods shops all kept it. Its use spread slowly as the price was excessive, for in 1721 the price was twenty-five shillings a pound. By 1745 it was thirty-five shillings, but even so the importation was immense, rising in 1763 to a million and a half pounds. By 1771 it had fallen to about three shillings a pound, and with slight fluctuations there the price remained.

To contain this precious drink high prices were paid for

American one. There is farther decoration, consisting of the pretty little floral sprigs with which we are familiar. All the pieces in this illustration are typical examples of the style of china which collectors for many years fondly called "Lowestoft," and show the usual forms of coffee, tea, and chocolate or hot-water pots.

The earliest specimens of this kind of china had cups without handles, like the one in Fig. 3, and besides those for tea and coffee a certain tall slender cup was brought for custard, sometimes with a cover. The three pieces shown in Figs. 3 and 4 are choice examples of the "sprigged" variety. Only the highest class platters had such a wealth of ornament as is shown in Fig. 4, and it was usual in such pieces that a coat-of-arms should decorate the center. In the extensive collection belonging to the Duke of Cambridge there are no handsomer pieces of festooned pattern, but instead of the vase of flowers his are crested.

Besides the caddies and the quaint chocolate pots, one of the most desired pieces in this ware was the helmet pitcher. This shape had long been made at some of the famous French potteries, notably those at Rouen, but in many of the French pieces made prior to the year 1700 the lip was masked. The handle was also peculiar, often taking the form of a long, slender, spotted leopard, but the body of the jug was exactly the same as in the so-called Lowestoft, with the spreading top and wide lip. The decoration on the French jugs was the well-known alternating scallop derived from the laces, damasks, marquetric, and ironwork of the period. It



6—Blue and Gold Decoration

tea services, and an old English letter dated 1740 states, "Tea has now become the darling of our women. Almost every little tradesman's wife will set sipping tea for an hour or more in a morning, and it may be again in the afternoon, if they can get it, and nothing will please them but to sip it out of chinaware, if they can get it. They talk about spending thirty or forty shillings upon a tea equipage as they call it."

By far the most interesting piece in Fig. 1 is the bowl shown at the right of the caddy. It has the American eagle, shield, thunderbolts, "E Pluribus Unum" and all! It seems as if some patriotic old sea captain had ordered it decorated for his own special brew of punch, made potent by "W. I. Rum," as they have it in the old records, and heavy with spices and fragrant with limes. It may have belonged to the great Elias Derby himself, who died in 1805 one of the richest men in New England, and whose ships brought in rolls and crates of china to Salem. On the shield below the stripes you can distinguish a "D."

There is another bowl in Fig. 2 and again in Fig. 5, also for punch, and this seems to have been a ship's bowl, or to have belonged to a follower of the sea, for it has on it the picture of a three-masted schooner. It is flying the English flag, so that seems to indicate that it was decorated before 1776. After that date the flag was pretty sure to be an

must have been from one of these French jugs that the Celestial potter derived his idea for the well-known "helmet jug."

But was it any wonder that such pleasing forms and decorations were popular? When the ware became the collector's fad a pretty story, probably originated by Mr. Chaffers, went the rounds, and detailed why a rose was so often used in decoration. It was said that one of the chief decorators of this ware at Lowestoft was a French refugee



7—Bread and Cake Plates

named Rose, who took this sentimental way of signing his work. The device of the town of Lowestoft was also a full-blown rose, which fact as well added to the romance which surrounded this ware.

A portion of a set of china decorated in blue and gold is shown in Fig. 6. It is more rich than you generally see, and shows plainly that it was done to order. It still belongs to the descendants of the family for whom it was made.

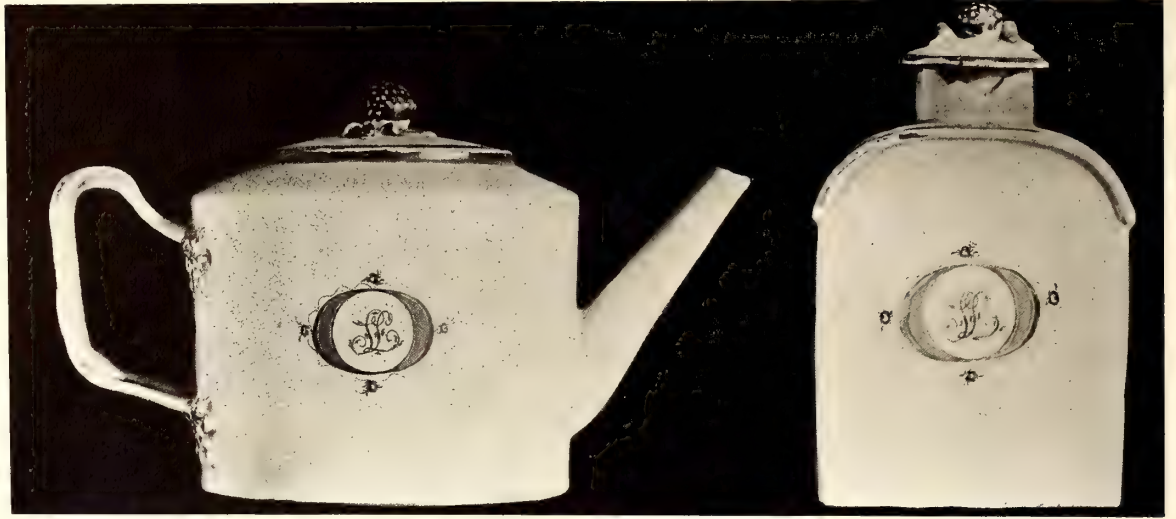
Commonly the blue is set off in a wide band and the gold laid over it. Much of this pattern may be seen at the Antiquarian Rooms at Concord, Massachusetts, where it looks extremely well in its appropriate settings of low-ceiled rooms and mahogany furniture.

Some handsome specimens of this were found recently in central New York State, a rather unusual place for this kind of china, which is more common near the sea-coast. The pieces had a crest, and very elegant it was. Two lions rampant are either side of a shield with quarterings, and on top is a seven-pointed coronet. The rosettes on the basket-work tray are picked out with color as well as gold, and the festoons of flowers are all in the gayest colors. One of the most interesting pieces in this set is a little salt cellar you do not often find in this country, but frequently met with in England.

But all this time, like the children with a favorite bit of candy, I have kept the most rare and highly prized specimen to be found till the last. Only a little tea-caddy, to be sure, but the desire of many collectors, be their particular hobby what it may, for it is decorated with the "Order of the Cincinnati," or a very close imitation of it, adapted to the shape of the caddy.

The history of this set of china with this device upon it is interesting, and has long been a puzzle to collectors. Many experts believe that the set was given to Gen. George Washington in 1784 by officers of the French Army, to commemorate their joining the Society of the Cincinnati. This opinion is not shared by members of the Curtis family who inherited the set, and who believed it to have been given by the members of the Society to their illustrious fellow-member.

Still a third theory has been advanced with regard to its origin, and this is that it was made in China under the direction of Captain Samuel Shaw, a resident of Boston, who, with General Knox, had organized the Society of the Cincinnati. This theory, which is due to Mr. R. T. H. Halsey, of New York, seems likely to be the most correct, since Captain Shaw was the trading agent for the owners of the



8—Tea-pot and Tea-caddy

ship "Empress of China," which was the first vessel to sail from this country directly for the only open port in China—Canton.

There is farther substantiation of this theory to be found in the diary of Captain Shaw, for he records that he was desirous of having the insignia of the order put upon a set of china, but that he was only partially successful, since the Chinese painters who were given the work, while excellent copyists, were not able to combine the portions of the pattern which was given them in separate engravings. This was about the year 1784, and it is known that General Knox owned some pieces of china with this device on it. It seems strange that china with this insignia on it should have been on sale for such as wished to buy, yet in the "Baltimore American" for August 12, 1785, an announcement is made that there is on sale "blue and white stone china cups and saucers, painted with the arms of the Order of the Cincinnati," just arrived from Canton by the "Pallas."

However the Father of His Country may have come into possession of this china does not much signify, for that it long was a part of the china treasures at Mount Vernon is well known. It is mentioned in the will of Martha Washington, was inherited by the Curtis family, was seized by the Federal forces during the Civil War, and now is stored in the National Museum at Washington. The caddy here shown is not at Washington, but is owned in Salem, Massachusetts.

The color scheme of this decoration is extremely crude and ugly, and includes green, brown, purple, gold, lavender and black. The figure itself blowing the trump of Fame is almost grotesque, yet such is the esteem that a piece of this ware is held in, that a plate was sold two years ago for the enormous sum of \$1,050. Anyone fortunate enough to possess such a piece as this caddy or a plate, has the nucleus of a collection of Armorial China that includes in it an example associated with one of our earliest and greatest china-lovers, General Washington. There is thus a personal and historical association of the deepest interest.



Round a Dutch Bulb Farm

By S. Leonard Bastin



FROM very early times the industrious people of Holland have been famed for their horticultural achievements. Indeed it will be no exaggeration to say that over a long period they practically kept the art of gardening alive in Europe. To-day the Dutch people are well up in line with the wealthy and larger nations of the earth in this direction. But there is one point upon which the Netherlands may be said to stand alone—its unquestioned supremacy as the bulb-producing country of the world. The reason for this may probably be found in two circumstances. Firstly, the age of the industry which has given to the growers such a grasp of the whole subject as is bound to give them a great start over more recent competitors, and in the second place the out and out suitability of the soil in Holland for the culture of all kinds of bulbous plants.

As is well known, the larger part of the Netherlands consists of a flat sandy plain which has been wrested from the bed of the ocean. Nearly all Holland is below the level of the sea, and would quickly be flooded with water were it not for the embankments which keep the waves in check on the ocean side, and the busily pumping windmills which draw up the accumulated inland moisture into elevated canals in the interior. The whole country therefore never knows the meaning of the word drought, while on account of the excessively light nature of the soil the drainage is perfect. Here we have the ideal conditions for practically all the hardy bulbs—sandy soil, dry and warm on the surface, but plentifully supplied with moisture a little way down. In addition to this, the Dutch growers have perfected a system for obtaining regular supplies of manure from the extensive dairy farms in South Holland and elsewhere, the splendid waterways enabling the material to be brought by barge at a low rate, and finally in smaller boats, using the lesser canals, conveyed to the fields for which it is intended without any need for carting at all. The soil in Holland which in its natural condition is almost pure sand, and may thus be spoken of as almost a negative quantity, can be brought up to the exact degree of richness required for any particular bulb by the addition of more or less manure.

Undoubtedly the time of all others to pay a visit to a Dutch bulb farm is in the spring of the year—about April. Then the whole district, of which the city of Haarlem may be taken as a center, is simply aglow with loveliness. In such a flat land, extensive views are not easy

to obtain, and perhaps the best idea of the bulb fields is, after all, from a train, which cautiously pursues its way along the top of embankments. The whole countryside reminds one of nothing so much as a huge patchwork quilt, composed indeed of far more glowing colors than were ever wrought into the homely bedspread. Red, blue, yellow, and every conceivable intermediate shade flash up in blazing response to the gay sunshine, till the eye is well nigh satiated with the orgy of color. But even Dutch trains (which will never come to grief through excessive speed) arrive at their destination sooner or later, and one alights with a fine curiosity to see and learn a little more about these wonderful bulb fields. Let us, therefore, accept the invitation of this hearty Dutchman—who, by the way, speaks English perfectly—to go over the bulb farm of which he is the owner.

A closer examination of the patches of color which were seen just now from a distance, reveals the fact that each is composed of thousands of separate blossoms. These flowering bulbs are planted with a wonderful regularity, being drawn up in rigid lines like so many soldiers. All those bulbs of a like age are placed in sections together, and this method of planting produces rather a singular effect. Starting at one end of this long row of hyacinths are the one-year-old bulbs; these have produced nothing but tufts of green leaves. After a few yards one comes to the bulbs in their second year; most of these have distinguished themselves with a small bloom. In the case of the three-year-old plants the blossoms are much finer, and so the flowers go on gradually increasing in fineness, as we walk from section to section, until at the end of the row one finds the bulbs which are in their sixth or seventh year. Thus it takes seven long years or thereabouts to grow a marketable hyacinth bulb. The same manner of planting as described above is followed in the case of both tulips and narcissi, although in these instances the length of time to produce a mature bulb is not so great. But one's curiosity is excited as to how the original bulbs are obtained, and this question opens up one of the most interesting chapters in the history of bulb farming.

With tulips and narcissi the available methods of increase are decidedly slow. Apart from the raising of bulbs from seed—a most laborious process—the grower is entirely dependent for fresh stock upon the offshoots which the parent bulbs annually produce. In the case of hyacinths a kindly provision of Nature has made the propagation of bulbs in large numbers an extremely simple matter. Each season the grower selects a number of



A Fine Tulip Field



A Truck Load of Hyacinth Blooms on Its Way to the Waste Heap

his largest hyacinth bulbs and sets these aside for the purpose of increasing his stock. These bulbs are technically known as "mothers," and in dealing with them one of two methods is adopted—"crossing" and "scooping." In the case of the former, the base of the bulb is cut across in four or five different directions with a sharp knife. In the latter instance the whole of the root end of the bulb is scooped away, thus leaving a circular cavity. Whichever process is adopted the "mother" bulbs are carefully stored in a perfectly dry place. Occasionally, to hasten matters they are put in a sunny position. When most of the moisture has passed away from the bulbs a strange thing happens. At the base of each "mother" a number of tiny bulbils begin to put in an appearance; as the weeks go by these increase very rapidly both in size and number. With the advent of the planting season each "mother," with all her offsprings attached, is placed out into the ground, and as soon as the warm weather sets in the bulbils commence to grow on their own account, every one sending up a long green shoot. When the usual time for harvesting the bulbs arrives it will be found that the "mothers" have well nigh rotted away, but in their place are to be found several dozen little hyacinth bulbs. These are dried off and stored away, there to await the autumn planting, when they will take their places at the bottom of the long row, to be moved up into a fresh section year by year until they are fully matured bulbs.

The most arduous duties of the bulb farmer consist in the annual lifting and planting of the crop. Every bulb is taken from the soil and replaced once in each year. After blooming time, the first few days of really warm sunshine soon cause the green sap in the leaves of the bulbs to begin its return journey to its underground storehouse. When the crop is judged to be in a ripe condition, small armies of workers, picturesquely clad, attired in long smocks and wooden shoes, sally forth to the fields. One is struck by the complete absence of digging utensils among the little

companies. As a matter of fact spades and forks are never used in the bulb raising operations, the whole business being carried on entirely by hand. In the Dutch fields the work is carried on with the greatest ease. Stooping toward the ground, the worker thrusts both his hands into the loose sand and gently drags the bulbs from the soil. As the crop is gathered in it is removed to the storage barns. When all the bulbs have been lifted from the ground the grower finds himself in a curious position. His land is so light and sandy that he dare not leave it without a crop, otherwise it will certainly be blown away. In many instances it may not be very desirable to plant other crops on the land, as this would impoverish the soil, and under such circumstances it is not at all an unusual thing for the farmer actually to plant wisps of straw to hold the fields in position.

Early in the autumn the bulb farmer must set about the planting of his stock, which has all the summer long been maturing in the storage barns. Again the work is accomplished entirely by the hands, and the bulbs once more safely in the soil it is necessary to take steps to protect them from the severe weather to come.

Winter in Holland means several months of hard, biting frost, and to leave the bulbs exposed, even though well covered with soil, to the rigors of the season would be to court certain disaster. In order to prevent damage by frost the surface of the fields is buried to the depth of five or six inches with straw and other litter. At the approach of more genial weather the mass of protecting material is removed, and by this time it is likely that many of the bulbs will already be sending up pale green shoots. Naturally the different kinds of bulbs do not all flower at the same time, but the display of bloom is at its height about the last fortnight in April. At this time one may see hyacinths, the early tulips, and narcissi blossoming literally in their millions. It is not an easy matter to give an effective idea of just what the fields look like in a photograph, although some of the accompanying pictures, taken by the courtesy of Messrs. Ant Roozen & Son, at Overveen, near Haarlem, may give



In this Manner the Blooms are Gathered with Extreme Care

some kind of impression. It is a question which is often asked as to whether the Dutch growers gather the flowers from the bulbs. As a matter of fact this is generally done, though not until the blossoms are fading. The reason for the removal of the flowers is a simple one: the grower is anxious to prevent any formation of seed, as such a development is likely to be a serious drain on the bulb.

The spring is a very busy time for the Dutch grower, for it is then that his farm is besieged by a host of buyers—special agents sent out by firms from all parts of the world—each eager to get the best material for his particular house. In addition to this it may be mentioned that many Dutch firms are now dealing directly with retail customers—a matter which is undoubtedly a satisfactory arrangement for both parties.

The bulb-growing industry in Holland is not merely a matter for the big growers; everyone has a hand in the business. Although so fully occupied during the day—and he sometimes works fourteen or fifteen hours out of the twenty-four for his master—the Dutch laborer will find time to produce on his land attached to his cottage a few thousand narcissi bulbs. The good wife and the children will lend willing hands to assist in the cultivation of the crop, well knowing that the proceeds from the sale of the bulbs will go to swell that little pile of money which is put aside against the rainy day. Truly the Dutch are a thrifty and a hard-working people.

The desire for novelty in the horticultural world has, of course, affected the Dutch bulb growers. In all large establishments a certain portion of the ground is devoted to experiments incident to the search for new varieties. Apart from the fact that all bulbs will at times produce "sports"—offshoots which exhibit a certain difference from the parent—the only way in which new varieties may be obtained is through the agency of seed. The interesting process of artificial cross fertilization is resorted to, but from beginning to end the whole process of raising bulbs from seed is one requiring an immense amount of patience. By the transference of the pollen from one blossom to another the experimenter hopes to influence the resulting seeds in a certain manner; but he can be by no means sure of this. Most trying of all, he will have to wait a matter of nine or ten years before he can see the result of his labors, for generally speaking it takes this time to grow a bulb from seed on to its flowering time. After all this waiting the new variety may turn out to be something very ordinary, and the grower will have had all his trouble for nothing. Still just now and again some real novelty is discovered among the numerous batches of seedlings which the experimenter is constantly raising, and then he will probably be well repaid for his past efforts. In all



A Field of Hyacinths of All Ages; It Takes Years to Grow a Mature Plant



The Canals Take the Place of Roads on a Dutch Bulb Farm



A Typical Heap of Flower Waste, Near Haarlem



The Dutch Growers Are Famous for Such Amaryllis as These

kinds of bulbs enhanced prices can be expected for good new varieties, but at the present time it is only in the case of the narcissi that really startling sums are being obtained for novelties. Fifty, a hundred, and even two hundred and fifty dollars per bulb have been paid for new varieties, and what is very remarkable is the fact that many of the varieties have commanded these high prices for several years and still show small signs of a reduction in value.

Such sums as mentioned above, however, are small in comparison with prices which were paid for tulip bulbs during the historic "tulipomania" which swept over the Dutch people in the early part of the seventeenth century. A single bulb of a variety known as *Semper Augustus* realized the immense sum of two thousand five hundred dollars, while on another occasion a bulb was handed over in exchange for a piece of land several acres in extent. Such instances seem to be almost incredible, nevertheless they are recorded as sober fact by trustworthy historians. Such a state of affairs could not of course last very long, and after about three years a great "slump" in tulip bulbs set in, and there is little

doubt that many of these speculators lost very heavily on their rash ventures.

Although hyacinths, tulips, and narcissi are the principal bulbs to which the Dutch growers turn their attention, all kinds are very largely cultivated. The smaller bulbs, such as snowdrops, crocuses, and scillas, are produced in huge quantities, while later on in the year the landscape in the bulb country is brilliant with ranunculi, irises, and gladioli. On some of the larger establishments a great variety of greenhouse roots and bulbs are raised under glass. Dutch growers are noted all the world over for the excellence of their stocks of begonias, gloxinias, and amaryllids. So that there is always something of interest for the visitor to see on a Netherlands bulb farm.

The growing of the tulip is a splendid example of an industry not devoid of esthetic charm. Not without reason may it be urged, however, that the cultivation of any flower



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is a vocation of interest. In the case of the tulip, there is the added intellectual quality of a history that forms a most striking chapter in the chronicle of modern finance.



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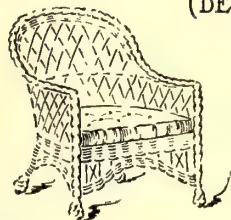
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GARDEN WORK FOR MAY

By Eben E. Rexford

SEED can not be safely sown in the open ground, at the North, before the first of May, and frequently not until the middle of the month. Exception should be made, however, in regard to peas and other very hardy vegetables. These can be put into the ground as soon as it can be properly worked. Development will be slow while the weather remains cool, and plants from seed sown after the weather has become warm and settled will almost invariably get the start of those from early sowings. All that is gained is—so much work is disposed of.

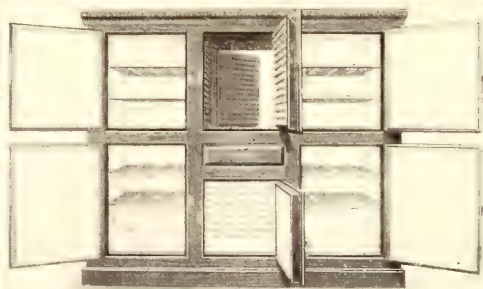
Weeding must begin as soon as the seedlings are large enough to enable one to distinguish between them and weeds. Most of the weeding can be done rapidly and well by the use of the garden cultivator. But, at first, it will be necessary to pull out the weeds in the rows, among the vegetables, by hand. Those close to the rows, where it would hardly be safe to run the cultivator, can be uprooted with the weeding-hook—a most efficient little instrument, costing only ten or fifteen cents.

Frequently seed will fail to germinate evenly. There will be vacant places which must be filled by transplanting seedlings from the rows where there are more plants than can be allowed to remain. This can be done safely if one takes pains to disturb the roots as little as possible. Do not pull up the seedling you propose to remove, but pick it away from those among which it grows with a sharp piece of wood—like a toothpick, but larger and longer—in such a manner that some soil adheres to it—enough to prevent the exposure of the tender and delicate roots to the air. If this is done, and a cloudy, lowering day is chosen for transplanting, not one seedling out of fifty need be lost. Make a little hole in the ground for the reception of the plant, corresponding as nearly as possible in depth to the length of its young roots. Take the plant between the thumb and finger of the left hand, drop it into the hole, and with the fingers of the right hand draw the soil about it as firmly as can be done without exerting much pressure. If transplanting must be done in sunny weather, shade the plants for two or three days. If the season happens to be a dry one, it is an excellent plan to cover the soil immediately about the plants with road-dust. This prevents the too rapid evaporation of moisture from the soil.

When your plants have fairly got under headway, attend to thinning out the rows where they are too thick. Never allow unnecessary plants to remain and rob the others of the richness of the soil. In the case of beets, or other vegetables which can be used as "greens," this thinning out need not be all done at once. Pull the surplus plants as you can make use of them.

A good word may be said for the dandelion. If a small space in the garden is given up to this plant, it can be grown to large size, and the rich earth in which it is planted expedites its growth to such an extent that its leaves are tender.

Look over the strawberry beds and decide if new ones are needed. If you conclude to make new plantings, let the old bed concentrate all its efforts on the production of fruit. But if you think it advisable to continue the old beds for another season, go between the rows with the garden cultivator and tear up the soil well, to put it in condition for the reception of the runners which the plants in the row will send out by and by. Later in the season, when runners have taken hold of the soil and developed into strong plants, spade up the old plants. Turn them under. In this



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way, by shifting the rows yearly, and practically making the bed over each season, one may get fine crops of berries from the same piece of ground for several years in succession, if he uses fertilizers liberally. If the old plants have become diseased, or the grub or maggot is found among them, make new beds and change the location of the strawberry patch to some other part of the garden. Get strong, young plants from the best growers. Set them out early in the season and cultivate them well, in order to put them in shape for producing a good crop of fruit next year. Discarded beds should be turned under as soon as their crop of fruit has ripened, or burned over to kill the old and probably diseased foliage.

If raspberries and blackberries have not been pruned, give attention to this matter at once. Cut out all old wood and all diseased or weak growth. By old wood, I mean such portions of the plant as can not be expected to produce fruit. This should have been removed last fall. Small fruits should be provided for, if this has not already been done. No garden is complete without its currants, its gooseberries, its grapes, its raspberries, blackberries and strawberries.

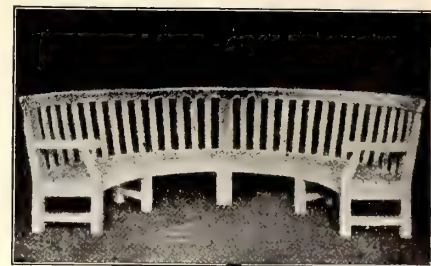
Lawn-making will be in order this month. If the ground is uneven, fill in depressions with loose soil, but pound it down well, as you fill in, to prevent further settling, which will result in an uneven surface. If you want the finest kind of a sward, go over the ground with something that will loosen it up and pulverize it thoroughly. Then sow thickly with the best lawn-grass mixture you can get. It pays to be liberal in the matter of seeding. Thick sowing means a fine show of grass early in the season, and a thick, velvety sward thereafter.

Shrubs can be set out as late as May 15th, though I would advise planting them earlier, if possible. Always buy the best stock on the market. You will be sure of getting this if you patronize the dealers who have established a reputation on the basis of honesty and absolute truthfulness.

Go over your shrubs and thin them out evenly. Cut away all weak wood. Do not prune healthy branches, unless it is absolutely necessary to do so in order to secure symmetry. As a general thing, most shrubs do not need this. Symmetry is one thing—formality quite another. The average shrub will be pretty sure to make a symmetrical development if let alone. By pruning we torture it into unnatural shapes. That is formality. Feed a plant well, prune it when and as it needs pruning, and trust it to take on the shape most becoming to it without further assistance from you.

Do not make your flower beds on the lawn. Leave the green sward unscarred by them. Have your garden somewhere at the side or the rear. Do not attempt anything elaborate in shaping your beds. Shape is soon lost sight of after the plants in them have made a little growth. Depend upon the flower for beauty, not upon its setting.

If you would secure the most satisfactory results, don't mix your plants. In other words, keep each kind by itself. Have as many kinds as you have room for and time to take care of, but give each kind its own bed, as a general thing. Of course, this rule, like all other rules, has its exceptions. We often secure pleasing effects by bordering a bed with a plant which contrasts well in form and color with the plant given greatest prominence in the bed. But the observant amateur will soon discover that the effect depends upon the subordination of the border plant to the other. It must never dispute the claims of the other to prominence. From this we deduce the rule that plants can not be combined satisfactorily unless one is willing to take the secondary place in the combination. Attempt to grow



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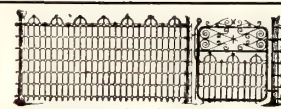
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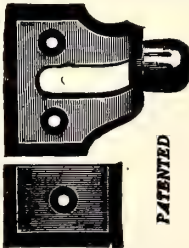
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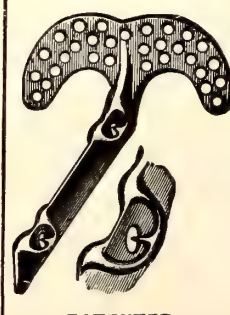
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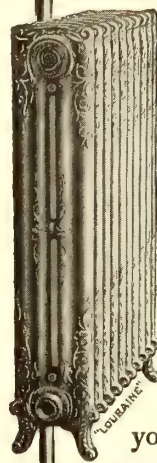
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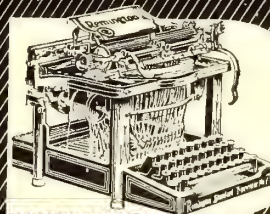
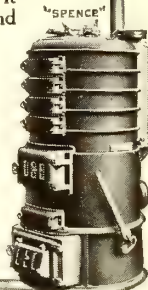
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the petunia and the phlox in the same bed and both will disappoint you, because neither will "knuckle under" to the other. But edge a bed of either of these plants with sweet alyssum, or candytuft—both modest flowers—and the effect will be pleasing.

Do not put dahlias, cannas, and caladiums into the ground until it becomes warm.

Gladioluses can be planted about the middle of the month. Set about four inches deep, in rich, mellow soil.

When you set out your dahlias, set a stout stake by each plant. Let it be at least five feet tall and strong enough to stand sturdily against hard winds. A well-developed dahlia will have a great many heavy branches and a stake of ordinary strength will be quite insufficient for adequate support. Last season I set three stakes in a triangle about each plant. They were about eighteen inches apart. I was well pleased with the result. They gave me a chance to support all the plant, such as one never gets when one stake is depended on. Under the one-stake system, many of the larger branches are broken off by heavy winds or split down under their own weight while wet. Under the three-stake system it is an easy matter to so distribute the weight of the plant that all strain is removed from the central point of support, and there is far less chance of damage from any cause. If these stakes are painted a neutral color they will not be noticeable after midsummer, if the plants grow as luxuriantly as they ought to, and as they will if you give them a rich soil and plenty of water.

A Rose of recent introduction, which seems to deserve special mention, is the Killarney. This is a hybrid tea, originating with Alexander Dickson & Sons, the celebrated rose-growers of northern Ireland, who have sent out some of the most popular varieties in present cultivation. It is of strong growth, with rich foliage, and is a wonderfully free bloomer, as reported by such authorities as Dreer and Henderson, and other large dealers in the United States, who never indorse anything not having unusual merit. Anything they send out can be relied on as well worth adding to one's collection, and they do not hesitate to speak of this new candidate for favor in terms of most unqualified approval. The buds of the Killarney are long and pointed, and open into large and superbly shaped flowers of a rich, brilliant pink. It has a delicious fragrance. It is said to have the hardness of La France, when planted in the open ground, and the claim is made for it that it is rapidly becoming a standard variety for forcing purposes. In brief, it is said to be "one of the world's greatest new Roses," and all lovers of the Rose will do well to add it to their collection this season.

HOW TO GROW THE WATER-LILIES

By Alexander Hooper

THE writer has had considerable experience growing water-lilies, and recommends the following method: Water-lilies are among the most beautiful flowers. Considering their popularity and the ease with which they are grown, it is to be wondered at that they are not more generally grown than they are. It seems to be the general impression that the beautiful lily ponds which give such an air of elegance to their surroundings are appropriate only for extensive pleasure grounds, or the broad lawns of a large estate; also, that only experienced gardeners and florists can successfully cultivate these lovely plants. Both ideas are mistaken. Flower

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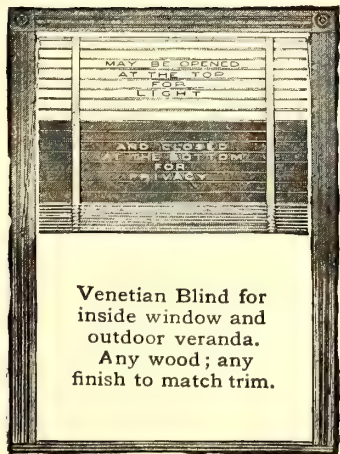
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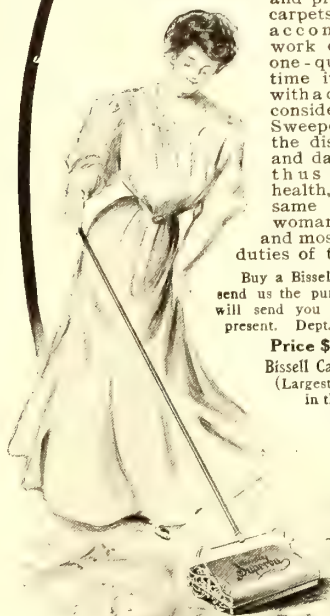
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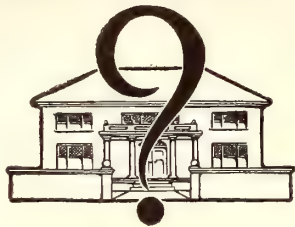
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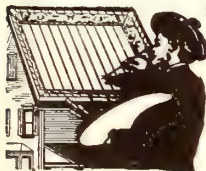
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lovers may enjoy these beautiful lilies all summer, and for many summers to come, with very little care or expense. No matter how small the yard, make a pond in proportion and plan for the summer beauty.

It is not necessary to prepare the large cemented ponds, similar to those in parks. Even if you have but a small city yard, with its tiny grass plot, or a small lawn, you may have a lily pond nevertheless, and a beauty, too, with little care. Under these circumstances a half-barrel pond will be large enough. If you live in the suburbs and have a large lawn, or in the country, with still more extensive grounds, with ample room for a large pond, but feel that you can not afford a cemented one, have one made of a large wooden cistern. It may be four, six, or more feet in diameter, with but little cost, and it will accommodate many fine plants. Plans should be made early, especially if you are to raise your plants from seed, as they should be started early for blooming during the summer.

The prettiest varieties are the African, or Zanzibar; they are purple, blue, and red. Seeds can be obtained from any seedsman at about fifteen cents a packet. To sow the seeds take a common bowl and half fill it with finely sifted soil packed down level and hard. On the surface scatter the seed evenly and cover with not over a quarter of an inch of fine sand; then very gently fill the bowl with water, so as not to disturb nor wash away the sand. A layer of moss placed over the sand will help to keep the water from displacing the seeds. Place where the water will be kept at a temperature of about eighty degrees. Do not allow the water to evaporate, and at the end of about a week you will find a multitude of tiny green shoots have made their appearance. Soon a small round leaf will form, and when each little plant has two or three leaves they are ready to be transplanted.

Two-and-one-half-inch pots filled three-quarters full of soil should be used. Gently pull up one of the seedlings so as not to tear its long top roots, and, making a hole in the earth in the pot, place the root carefully in and gently press the earth around it. Cover the surface with a quarter of an inch of sand, as before, and place the pot in a pan filled with water, so that its top may be about an inch or two below the surface of the water in the pan.

When placed in a warm sunny spot the plants will soon begin to grow, and when the pots are well filled with roots the plants may be slipped from them and planted in the pond without disturbing the roots or breaking the ball of soil. The little plants should be planted in the pots during March or early April, and about the fifteenth of May or the first of June they may be taken outdoors and put in the tubs.

The half-barrel pond is made by sawing a large, strong barrel or cask, with iron hoops, directly through the center. Sink half of the barrel in the ground (or both halves, if you have room for the two ponds) to within two inches of the rim. If possible, use the soil from a natural lily pond—pond muck, as it is called—but if this can not be obtained a rich soil of leaf-mold or garden soil, mixed with manure and sand, will be found very satisfactory. If it is possible to obtain the natural pond muck you may also be able to secure a few roots of the common white water-lily, and it may be well to experiment with these before buying the more expensive varieties. After the tub is sunk in the ground, and in position, fill in the natural or prepared soil to a depth of six or eight inches; lay the lily roots carefully on the soil, placing each small fiber in its proper position, and cover with two or three inches of fresh soil or fine white sand, and then

fill the tub gradually and gently with water. Do not put in more water at first than will just suffice to allow the leaves to float on the surface. They will grow quickly, and soon your tub will be covered with leaves so that you can no longer see the water. If the tub or half barrel is small do not have more than one plant to a tub.

In about six weeks the flowers will appear. From that time until frost you should have flowers almost daily. Keep the tubs full of water by adding a little every three or four days.

If a larger pond is wanted a wooden tank several feet in diameter is necessary. This may be lined with zinc, and it should be so constructed that it can be drained out in the fall. The pond should be made similar to a wooden cistern, the straight sides being about four feet deep and the pond as many feet in diameter as you please; four feet will accommodate about six plants.

There are three great divisions of the water-lily family: 1. Hardy Nymphaea, those which in their natural state live outdoors through the winter. 2. Tender Nymphaea, those brought from tropical countries, to which class the Zanzibars belong. This class may be divided into day and night-blooming sorts. 3. Nelumbiums, or Lotus, the largest and grandest of all, but one as well adapted for tub culture as the others.

Those who do not care to go to the trouble of raising seedlings may buy roots about the first of May from the seedsmen. They can be immediately placed in the tubs, and will go on growing as though they had never been disturbed.

In filling the pond with water, after planting the lilies, do not fill it full at first; simply keep the water a few inches above the growing plant, until at last the pond will be full of water, with the large, glossy leaves floating on the surface. The following are the more desirable varieties for home culture: Nymphaea Zanzibarensis, blue, red, and purple; Nymphaea Scutifolia, pale blue, and Nymphaea Dentata, white. These are all day-bloomers except the last, which blooms at night, and will all grow from seed.

One of the best of all varieties is the Nymphaea Marliacea Chromatella, a wonderfully strong grower and profuse with its bright yellow flowers. Roots of this sort should be bought; they cost about fifty cents each. Nymphaea Odorata Rosea, pink, and Nymphaea Odorata Sulphurea, yellow, cost the same, and are almost as good.

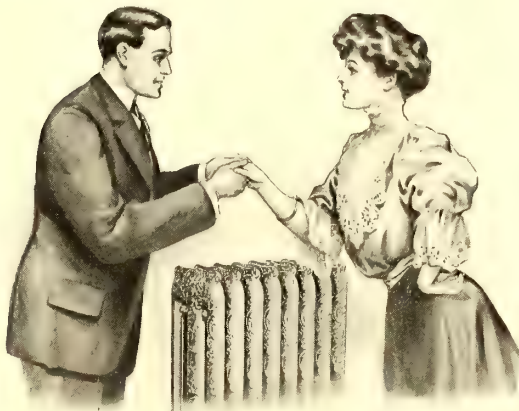
Among the lotus section the common Egyptian lotus is the best. A plant or tuber will throw up immense leaves and flowers to a height of five feet above the water in the tub. All of the above and many other varieties of the water-lily family bloom freely. The flowers open three successive days, and then they die, sinking below the water, but there are new ones constantly taking their places. Slight frosts will not injure the lilies, but before there is danger of freezing pull out the plug and allow the water to run off; then replace the plug, fill the whole tub or pond with dry leaves raked from beneath the trees and cover securely with boards. When the weather becomes settled in the spring remove the leaves, add a little fresh, rich soil and fill in the water as before.

A MARVELOUS HYBRID MALLOWS

FOUR years ago a Philadelphia nurseryman began some experiments with the common marshmallow of the Jersey meadows and effected a cross fertilization of it with the cultivated Hibiscus. The familiar

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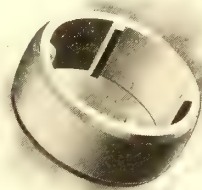


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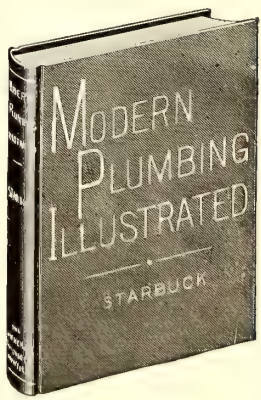
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SCIENTIFIC AMERICAN SUPPLEMENT 1551 contains the principles of reinforced concrete with some practical illustrations by Walter Loring Webb.

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SCIENTIFIC AMERICAN SUPPLEMENTS 1575, 1576, and 1577 contain a paper by Philip L. Wormley, Jr., on cement mortar and concrete, their preparation and use for farm purposes. The paper exhaustively discusses the making of mortar and concrete, depositing of concrete, facing concrete, wood forms, concrete sidewalks, details of construction of reinforced concrete posts, etc.

SCIENTIFIC AMERICAN SUPPLEMENT 1372 contains an article by A. D. Elbers on tests and constitution of Portland cement.

SCIENTIFIC AMERICAN SUPPLEMENT 1396 discusses the testing of cement.

SCIENTIFIC AMERICAN SUPPLEMENT 1325 contains an article by Professor William K. Hatt giving an historical sketch of slag cement.

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process with pollen was carried out, and truly marvelous results followed. One of the new seedlings had a dazzling brilliant color and was hardy enough to survive winter exposure. This plant formed the basis of further experiments, and is the original still in the Philadelphia nursery.

With such a strenuous offspring, it was now possible to set to work in earnest to improve the swamp mallow. The flowers of the new hybrid were pollenized with another type. The seedlings from this fertilization, it was noticed, were vastly different in form and foliage, showing great promise of a successful cross. The first flower to bloom was a glorious pink, a shade never before seen in a swamp mallow. This was followed in rapid profusion by flowers of every shade of pink, white, red and scarlet. A new race had truly been created. A new page to horticultural research was added.

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TARVIA, THE DUST LAYER

ANOTHER automobile season, and many people, especially those who live on thoroughfares frequented by automobiles, as well as the automobilists themselves, will look with renewed dread to the summer dust nuisance.

Many modern automobiles are so designed that the occupants are not disturbed by the dust of their own machines, but they can not escape that raised by other vehicles on the road. As for the householders, they suffer constantly, and the coming of the automobile has in many cases depreciated instead of increased the value of property.

Everybody has seen roads where clouds of dust hang for many minutes in the air after the passage of a single automobile. Sprinkling is expensive, and instead of decreasing the nuisance actually increases it. The constant use of water on the road breaks up the natural bond of the top dressing so that mud is formed, which soon becomes dust again in the hot sun. Roads which are regularly sprinkled require re-surfacing much oftener than roads which can be left to themselves.

Oil has been used in many localities for the purpose of suppression of dust, especially in California, where it is exceedingly cheap. It is only partially effective, and develops another nuisance on account of the damage it does to vehicles and to garments.

The best of the propositions for the suppression of dust, and the one which is recommended by the United States Department of Agriculture, is a tar preparation of the right grade and character. This is sold by the leading manufacturers of coal tar products under the name of Tarvia, the makers having made prolonged experiments to determine which of the various tar compounds is best adapted to the purpose.

In France this material has been used since 1900, when the League for the Suppression of Dust first reported successful experiments with it. This League was formed to abate a dust nuisance which was rapidly making the Riviera positively unpleasant in many sections and seriously damaging property values at the great resorts of that district. The use of Tarvia was so successful that it was adopted with modifications in all the departments of France, and it is now the standard method of preserving macadam roads throughout the French Republic.

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But, unless it rests on a base which is immune against swelling and shrinking, unless it controls the foundation on which it is placed, unless the lath is perfectly imbedded in it, its fireproof qualities count for nothing. Any combustible plastic substance might just as well be employed so far as fireproofness is concerned.

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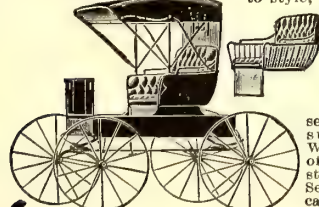
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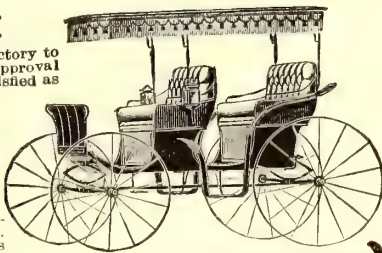
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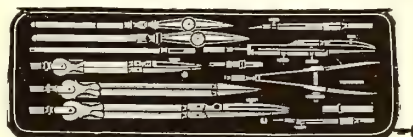
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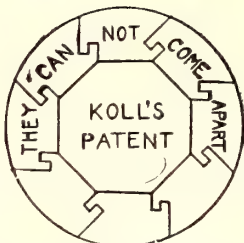
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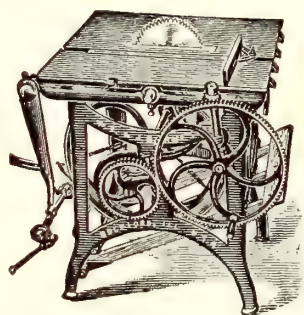
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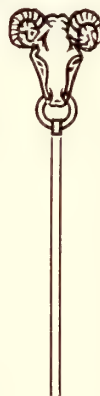
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Wherever roads are properly maintained, especially in city parks and parkways, Tarvia effects considerable saving.

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WHERE will the house you own or are building first get shabby? Without doubt where it is subjected to the roughest usage, and to unobserved and insidious decay. The exterior of a building, where it is not composed of the most durable material, such as stone and brick, slate, etc., has the materials graded to oppose the action of the elements, where it is most persistent. Thus it is, that even though the walls of the building may be of wood or of stucco, the roof and the foundations are made of imperishable substances. The foundation is always of non-absorbent stone, or brick; and in like manner the roof is preferably of mineral matter, slate, burned clay, tile or metal, or at least of asphalt, which is mineral in origin.

Without doubt the entrance of the house is the part subjected to the roughest usage, and it hardly requires any argument to convince one of the utility of making the vestibule floor, over which all the traffic of entering and leaving is concentrated, of some imperishable material. Therefore it goes almost without saying, that the vestibule, at least, is to be tiled. It should require no argument to demonstrate the desirability of making the walls of this entrance of similarly indestructible material.

But it is not only wear or direct rough usage which tells upon a house; an internal decay indicated by unpleasant or musty odors will be found even more objectionable and almost impossible of removal. The worn floor may be repaired, the battered wall may be replastered and papered; but it is impossible to reach with such renovations, the evidences of decay indicated by the sense of smell.

It is therefore of vital importance to discover where the house breaks down in this particular, and loses its value, after but few years of occupancy.

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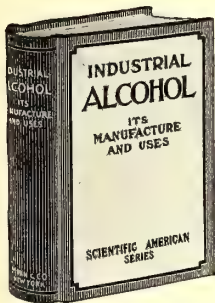
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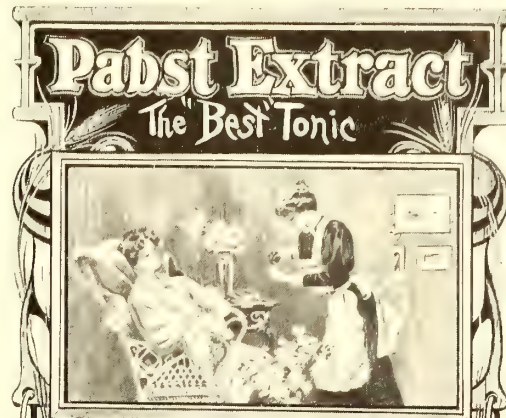
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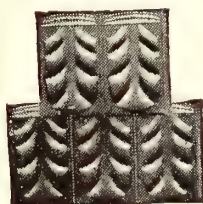
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already achieved in this particular, by the way of modern, open plumbing, have already pointed out the way. But, after all, while through this improvement places formerly concealed are now exposed to view, and subjected to more frequent cleaning, the essential root of the seat of decay has not been touched, except where the object of decay has been made of undecomposable material.

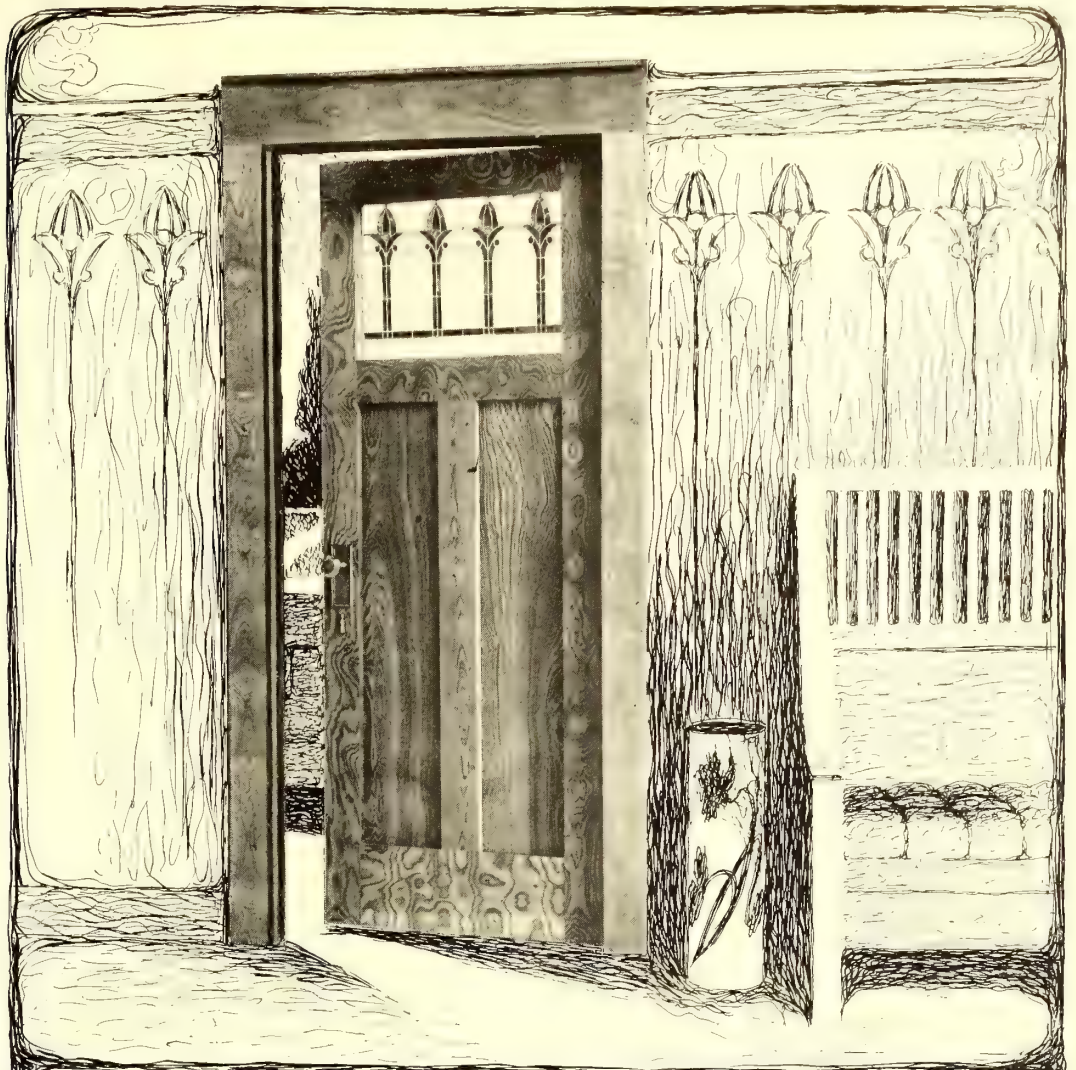
It is not so much the collection of visible trash or filth, in the closets and pipe enclosures of the old plumbing, that was responsible for the unpleasant conditions that went along with it, but the fact that moisture condensed on the cold water-pipes outside, which trickled down and was absorbed by the surrounding wood of the joists or flooring. The amount of moisture thus collected is never sufficient to make the wood actually feel damp, but it is sufficient to support the organisms of decay, the moulds and putrefaction germs, which live in and upon vegetable matter such as wood, by being constantly supplied with this small amount of moisture, particularly under the stimulus of constant warmth. Now the latter is supplied by the contiguous hot water pipe. These germs of decay, or rather of odor more than of visible decay, are known to the bacteriologist as "anaerobic," which means that they live in substances out of contact with air or light. The effects of their destructive action are therefore not commonly seen, and only become manifest in course of time to the sense of smell.

The complete remedy is therefore to make the floors and walls subject to moisture and warmth, either through general use, or through the fact that water-pipes pass through them (as described above), of material which can not decay, that is of purely mineral matter.

Such material is stone, slate, cement and burned clay tiling. From what has been said above it will occur to everyone, that the floors and walls in which this destructive action takes place, and which, therefore, are the centers from which radiate the influences that destroy the value of the house, are the bathroom, kitchen, and the pantry.

On account of the attractiveness of the modern bathroom, through the luxury and elegance of the present plumbing fixtures, it has become the object of pride, and a sort of showroom with the modern housewife. In consequence the use of tiling in this apartment has become common, without thought of its importance in the sense just explained. While it is accepted, it is so as a luxury rather than a utility, and it would be well for those who in building are compelled to cut out superfluities, to consider that at bottom the utilitarian aspect of tiling this apartment is of vastly greater importance than the incidental beauty of the work.

Because its use is as yet so indissolubly associated in people's minds with luxury, tiling of the kitchen receives with us almost no consideration. And yet from what has been said above, it should be plain that this is the first place in which such material should be applied. This is invariably the case abroad, and because it is true, you find habitable and comfortable houses that are hundreds of years old; while in our country, the mansions of the wealthy less than a quarter of a century in age, which have been kept as fresh and clean as the labor of servants could keep them, are turned into boarding-houses, not only because the neighborhood becomes unfashionable, but because the houses themselves have become musty, and malodorous, and their well-to-do owners want to build new ones, abandoning them for many causes, among which this is perhaps the least avowed but the most cogent. The kitchen therefore is the place above all places where for the sake of economy the walls and most particularly the floor should be tiled.



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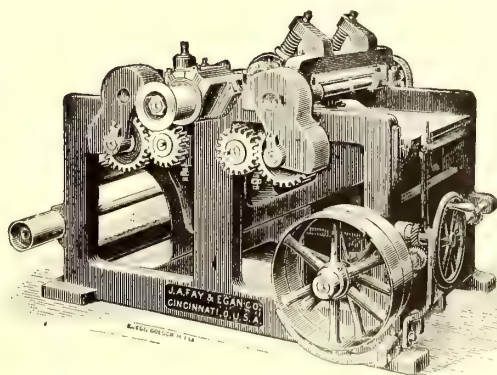
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THREE ACRES AND LIBERTY. By Bolton Hall. New York: The Macmillan Co., 1907. Pp. 24+435. Price, \$1.75 net.

This book, Mr. George T. Powell tells us in his introduction, is not intended to deal so much with the technique of agriculture or to give instruction in its requirements, as to awaken active and earnest thought upon the social betterment of our rapidly increasing population. As this betterment is, according to the author, to be found in small farming, the responsibility of stirring people up to new modes of life, with every detail of which they may be unfamiliar, is very great. Mr. Hall attacks his subject vigorously; he quotes copiously from the printed experiences of others and from the various persons who, in the last few years, have extolled the pecuniary advantages of country life. He does not present his own experiences, as the title of his book might suggest, but summarizes the whole of recent literature on this subject. He does so in an interesting and orderly way, marshaling his facts in due order, presenting them with enthusiasm, but tempering his suggestions with many words of caution that are weighty indeed.

Perhaps the real test of the value of the book is given in Chapter VI, touching on "What an acre may produce." The reader who advances as far as pages 91 and 92 will there find tables of the crops that may be obtained from an acre of ground, and their money value. We can, we learn, obtain 10,000 quarts of blackberries, which, at seven cents a quart, will give the handsome amount of \$700.00; asparagus, yielding 3,000 bunches at twenty cents the bunch, will bring in \$600.00. Labor, we are further told, will cost from \$1.35 to \$1.50 per day. It is just to Mr. Hall to say that he gives authority for these figures and that he regards them as conservative. Let it be granted the crop figures are correct, it by no means



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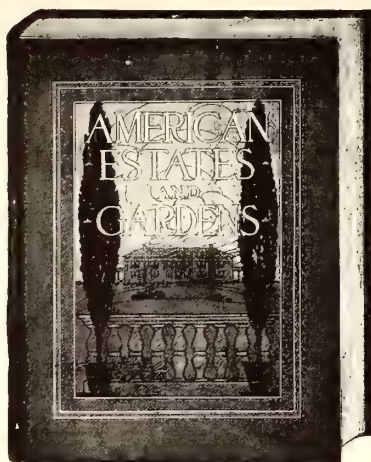
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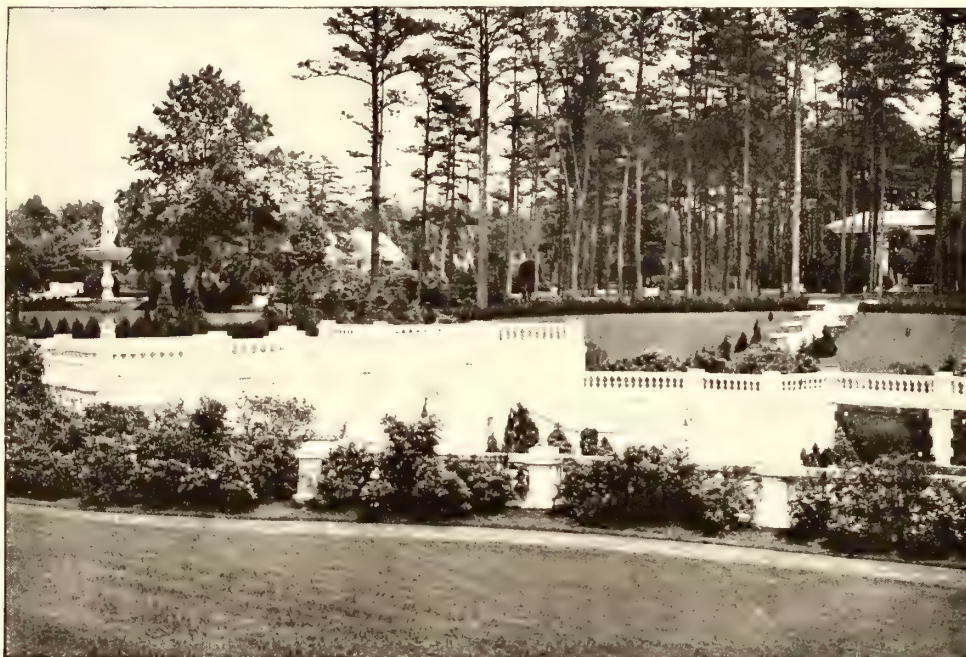
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follows that the gross income will be the amount stated. In a later chapter he utters a much-needed note of warning against counting profits from chickens, on the ground of inexhaustible competitors, who will keep the market flooded with birds and eggs. It does not seem to have occurred to him that this may also be the case with vegetables, and he is probably unfamiliar with the experiences of Long Island farmers who from farms, within the city limits of New York, have taken load after load of perishable crops to market, only to get the barest sum for them, while many a time they have been destroyed or thrown away as valueless.

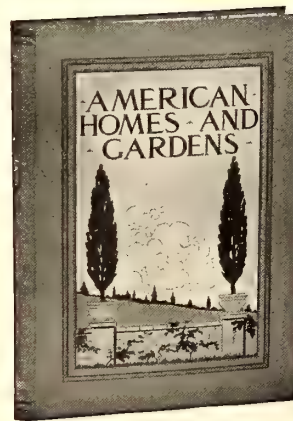
The fact is farming, especially for the new and untried man, is beset with countless difficulties and is more likely to contain failures than successes. The figures of possible incomes accumulated by the statisticians are veritable towers of strength and encouragement, but the reality is often quite the reverse. Mr. Hall is alive to these conditions in a limited way, but his book would, of course, never have been written had he regarded them as matters of the first consideration. There is enthusiasm in what he writes, and his method is quite distinct from that of other writers on this broad subject. It is not intended as a guide to agriculture, but to arouse interest in it. It will hardly do that without leading the reader further a-field, and it is unfortunately the case that it is the rosy side of this life which is represented in books of this sort rather than the opposite. It is a picture that has two sides, and both sides should be studied before it is too late.



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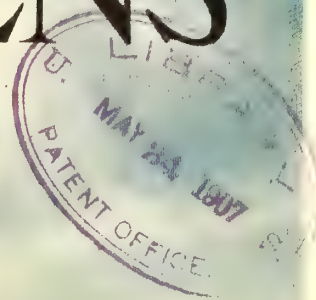
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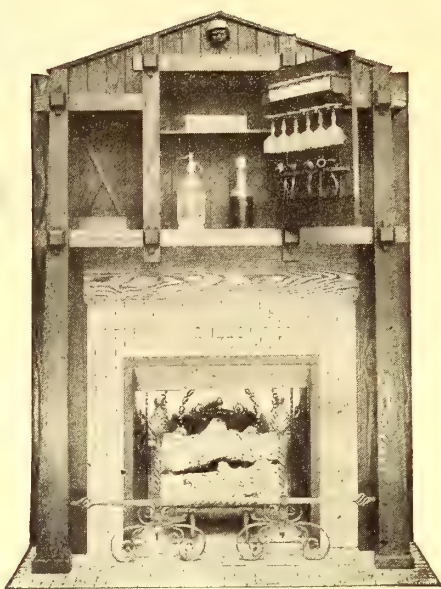
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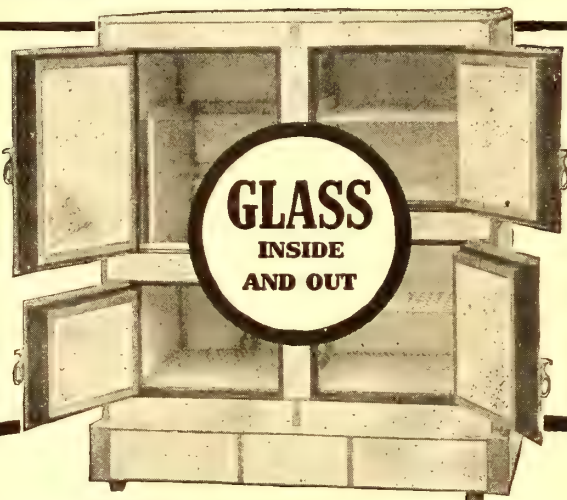
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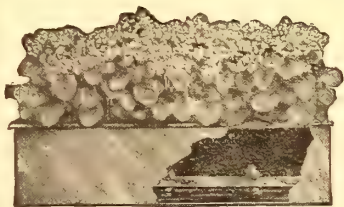
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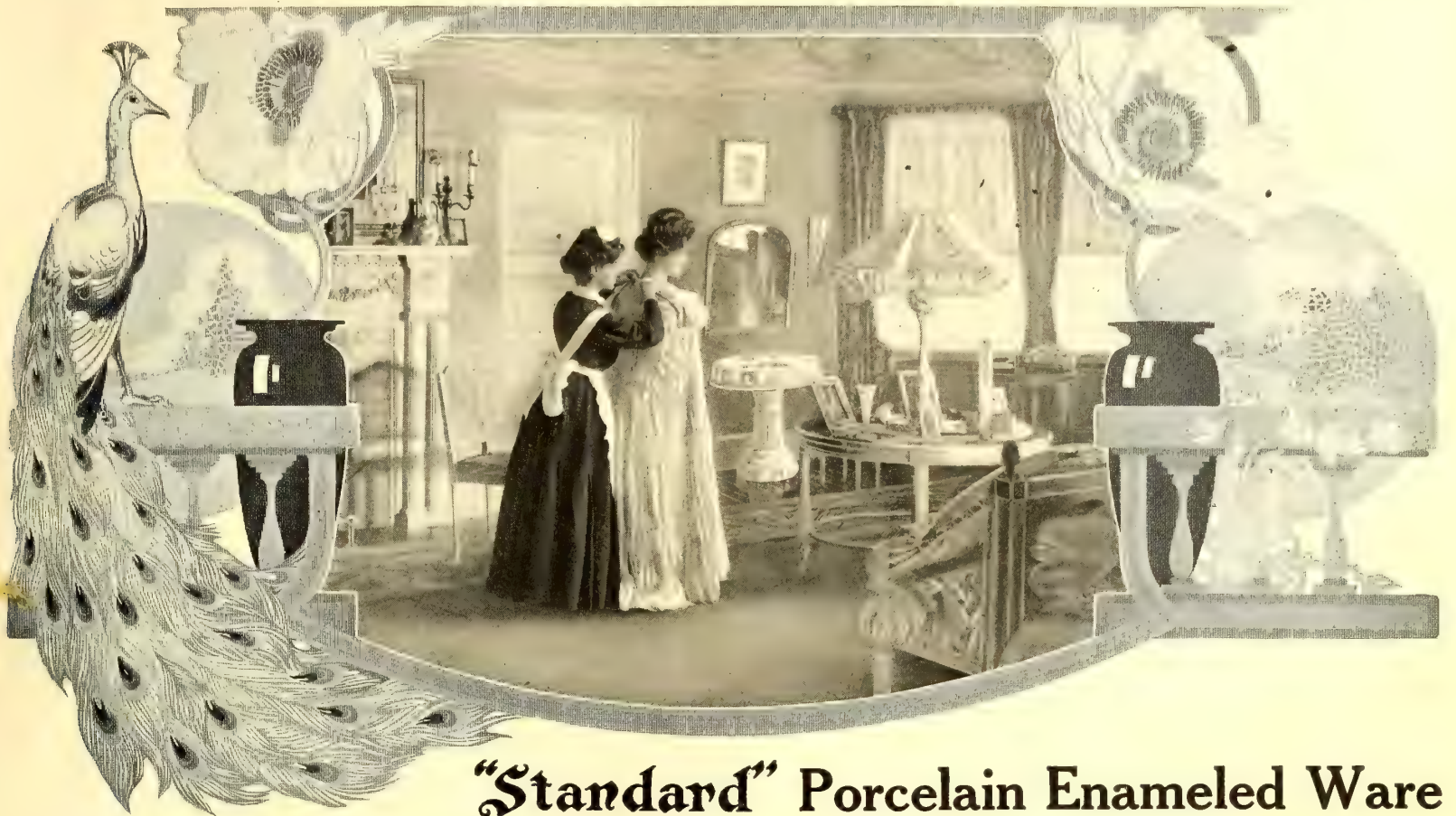
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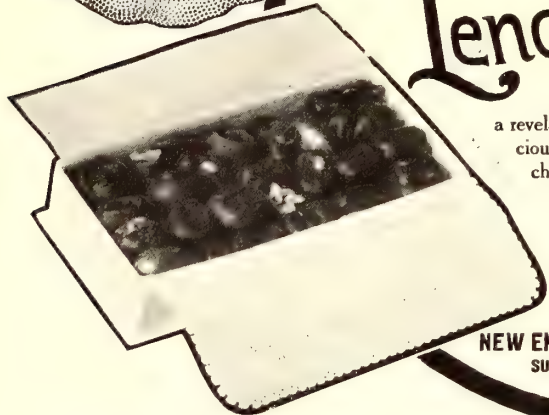
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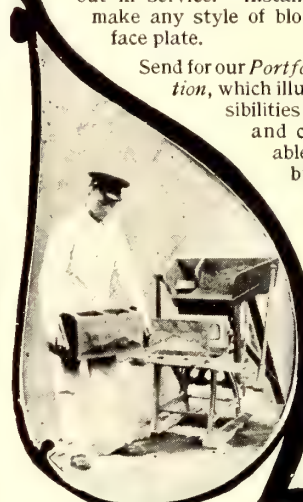
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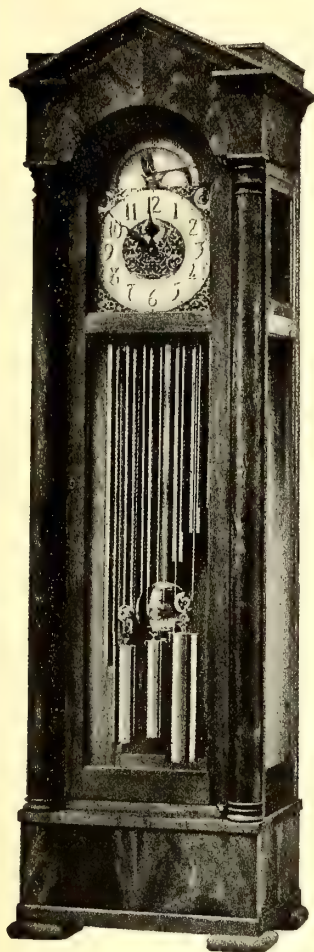
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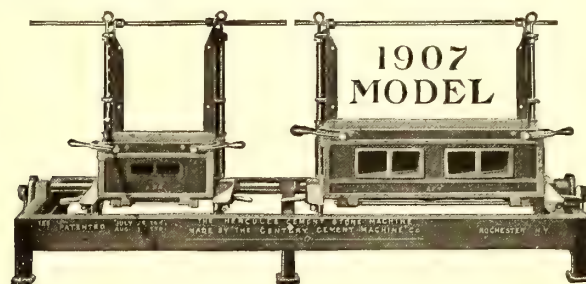
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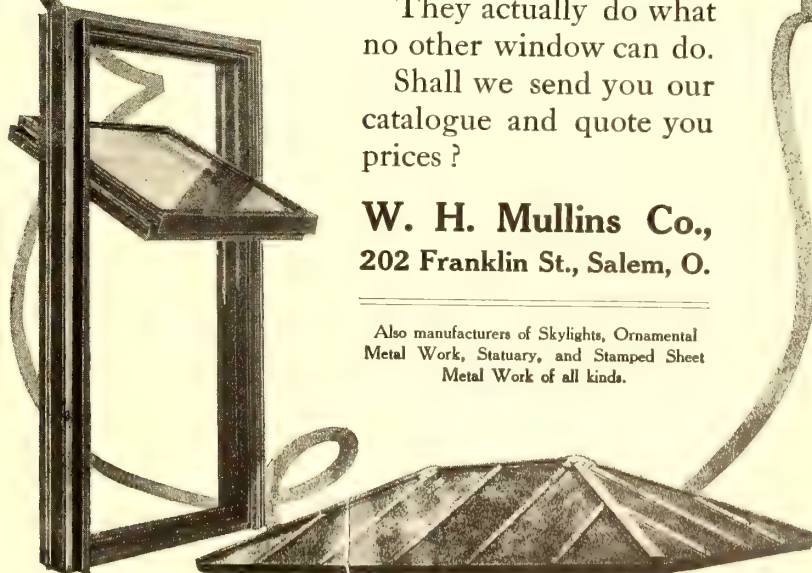
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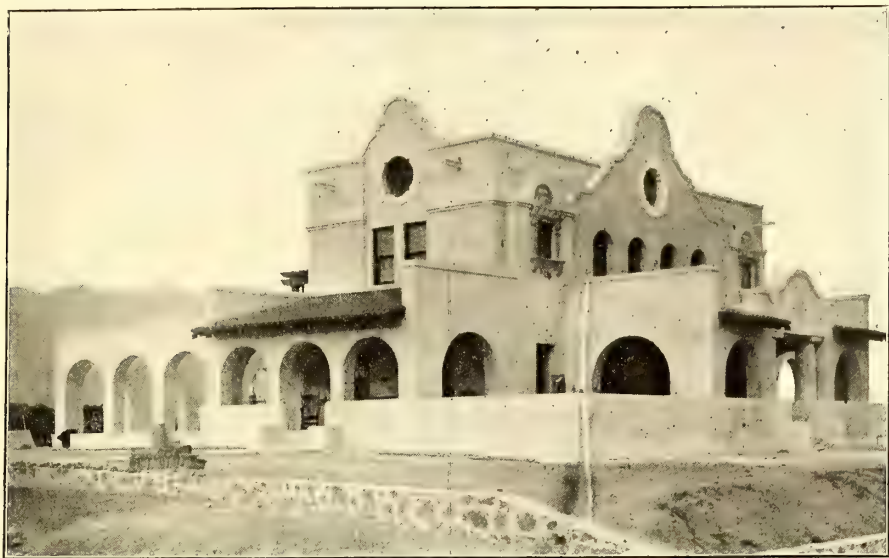
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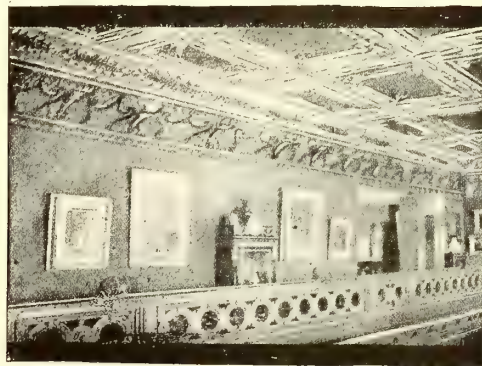
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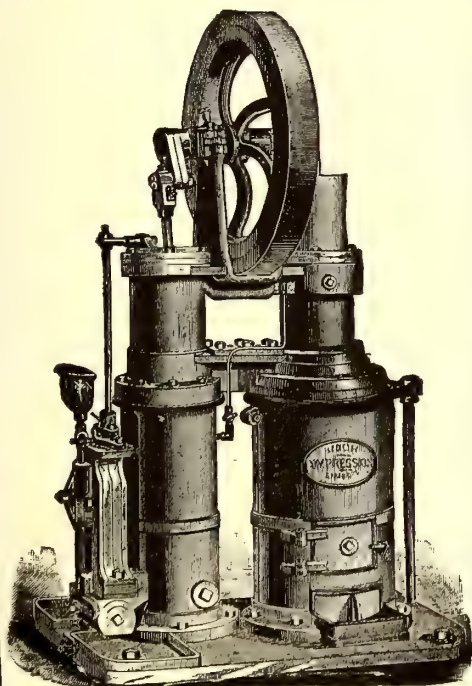
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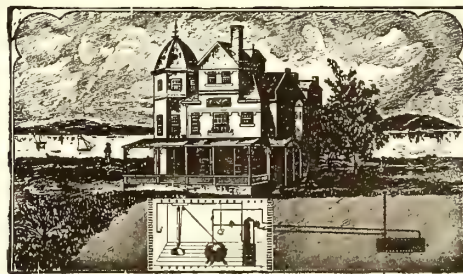
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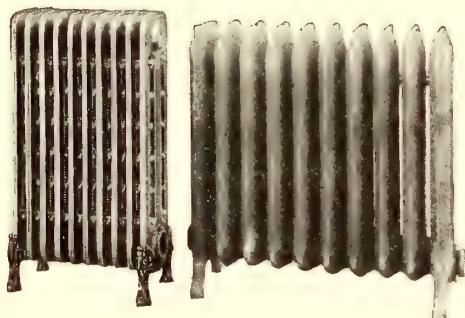
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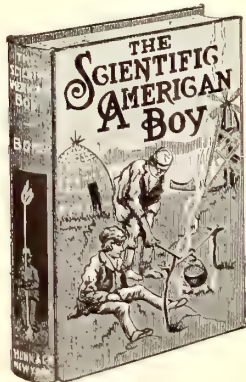
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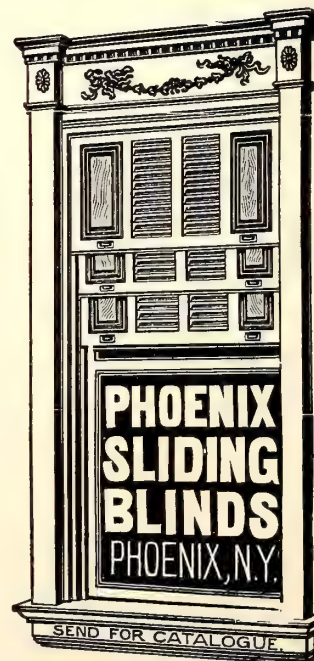
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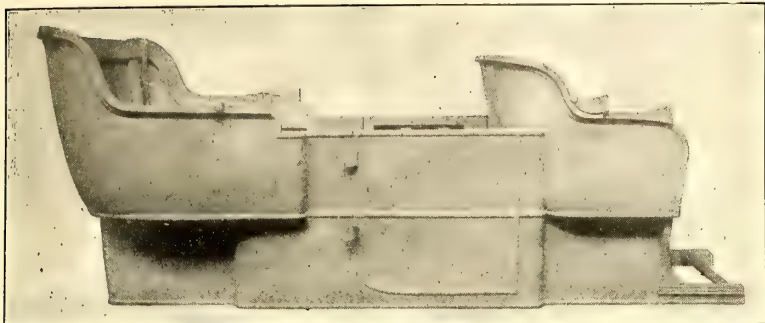
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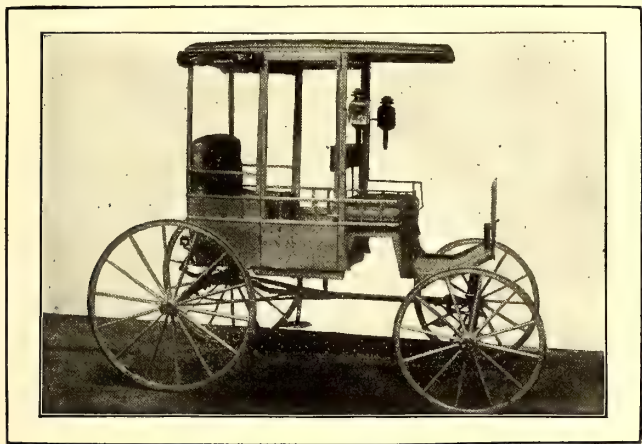


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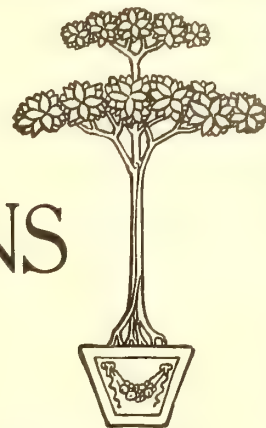
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"Hurstmont,"—The Belvedere at the End of the Walk Above the Formal Garden

AMERICAN HOMES AND GARDENS



Volume IV

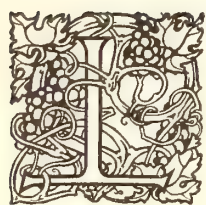
June, 1907

Number 6



"Hurstmont"—A Spacious Pool Is in the Center of the Formal Garden

Monthly Comment



THE purchaser of rural property—property so far removed from the city as to scarce justify the designation “suburban”—has many difficulties to contend with, not a few of which are completely unanticipated. The essentially rural characteristics of the natives of the soil present, to the newcomer from the city, strange and unusual aspects of human character. This is particularly the case if the new purchase includes buildings of any sort, and the situation becomes acute if the former owner continues to reside in the near vicinity of his old home. As likely as not that precious heirloom has been disposed of at an exorbitant figure, at a price, at least, that represents vastly more than the actual value to the seller; else why should he sell? Having sold, and the purchaser having paid, the latter, somewhat naturally, expects to obtain undisputed and exclusive possession of the property. As likely as not, however, the person who has sold, fails to realize that the place is no longer his, and that he must not only remove instantly and completely everything that belongs to him, but that he is expected to put in no claims whatsoever for anything that he may have left behind him. The newcomer has packed all his goods and chattels in moving vans or upon railroad cars, and by the time they have reached his new home the old one may be filled with the belongings of a new tenant. He knows, as a matter of fact, that he must bring everything he has, and that he certainly cannot make continuous trips to the old place for articles that may have been purposely left behind or which may have been carelessly forgotten.

THE point of view of the seller, however, may be very different. Accustomed for years to live among people with whom a certain amount of rude accommodation for each other is universal, he does not realize any necessity for swift action. Being a countryman, any idea of swiftness in motion is opposed to his natural state of being. His thought and his movement are actuated by a spirit of torpidity that is highly exasperating to those who realize that life is short and that there are many things to do. The newcomer will convey his goods in a huge and lofty conveyance, almost top-heavy in its dimensions and in weight of contents. The native will move deliberately in the smallest available wagon and with the minimum of help. He will not do this with the deliberate intention of creating annoyance, but simply because he knows no other way. His moving will be a matter, not of days, but of weeks and even months. If there is an apparently vacant room in the house he has sold he will store goods in it until he can get some accommodating soul to help take it away. His outbuildings will be filled with truck, to which he will return again and again for a bit of tin, or a bar of iron or something else which he needs in the new house, and which he knows can be obtained from the old by simply picking it up.

THE newcomer is helpless before these doings. It is a line of action quite unthought of. He knows the seller means no harm, he knows the odds and ends taken out from time to time are articles of no value, but he also thinks it should not be done, and that, having purchased the place, he should be left in undisputed possession of it. The regrettable part of the whole situation is that neither party understands the point of view of the other. The newcomer may realize that no harm is intended, but the native could not, by any possibility, be brought to see the other's point of view. And yet there are people who do not understand why the new-

comers into the country do not always get along as well with the old timers as they should. They do not understand the friction that so often arises between the city man and the country man. It is simply a failure on all hands to understand human nature. It is a condition that is surely agreeable to no one, and yet there must be a greater leavening of the rural regions by the city folk before this state of affairs can be really bettered.

A HIGHLY significant factor in the erection of concrete buildings, which are rapidly attaining a widespread popularity, is the realization that stability and security in such structures cannot be obtained without the exercise of unusual care and skill on the part of the workmen. In buildings of the old type—of brick and iron and wood, the responsibility for safety rested almost wholly upon the architect or the engineer who designed them and estimated, with more or less careful precision, the strains, pressures and other forces the structure must sustain and resist in order to remain upright. With this, of course, goes an inspection during the process of erection, a task generally performed with no great difficulty, although, it is true, it is often shirked and often dishonestly done. But the concrete construction calls for especial skill and care in applying the concrete, and builders in this material have awakened to the fact that it can only be properly done by workmen of a high grade and with most rigid inspection in every part of the work by the foremen and overseers. While this type of building is but in its infancy, it has already been realized that special care must be taken or it will fail to yield compensating advantages in such essential matters as economy and safety.

THE many serious railroad accidents of the past winter have brought squarely before the whole people the question of safety in railroad travel. The history of railroading in America has been blurred by many an unnecessary and avoidable accident, but the tragedies of the past year have been so numerous and so seemingly needless, that the attention of the whole people has been concentrated on this subject. Just how far the question of great speed is a factor in these accidents only an expert railroad man can determine, but it is significant that this aspect of the matter has been widely discussed, and even some very fast trains withdrawn in deference to recent agitation. Even among the uneducated classes in Europe the rapidity of American railroad trains is put down as explaining the awful slaughter of human life by this means—a reflection that is supposedly mightily comforting to those who jog through the sequestered regions of the Continent on the slow-going “omnibus.” The reasoning is hardly so acceptable to the commuter who finds his accustomed express taken off and his attention invited to the surroundings of every little station on his line. But that rapid railroad travel—unduly rapid travel—is dangerous seems now to be generally admitted, a point of value, since, if people become afraid to ride on the railroads, steps must be taken, and taken at once, to better existing conditions. The removal of the fastest trains will hardly accomplish the desired result, and may, indeed, react disastrously, as being a confession of weakness and inability. But in a broader way it is a gain for many people to realize that the chief object of life is not to rush madly from point to point, caring only when one leaves one's place of departure and when one arrives at one's destination. There is always something between the beginning and the end, and in travel this is often of the utmost interest. It is hardly possible that we will become a slow-traveling nation.

Notable American Homes

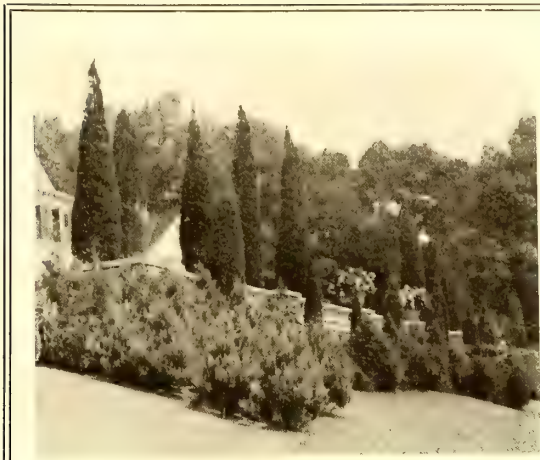
By Barr Ferree

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James Tolman Pyle, Esq.

Morristown, New Jersey



THE house of Mr. James Tolman Pyle at Morristown, N. J., is situated on a hillside that rises quite sharply from the boundary of the property. The ascent is so steep, in fact, that while the house is not far within from the road, it rises high above it in a picturesque mass, a delightful arrangement of gables and porches and high-pitched roofs, serenely aloof in the privacy of its own lofty situation. The roadway up to it passes beneath lofty forest trees—for all the space beyond and behind the house is densely wooded—superbly bordered with rhododendrons.

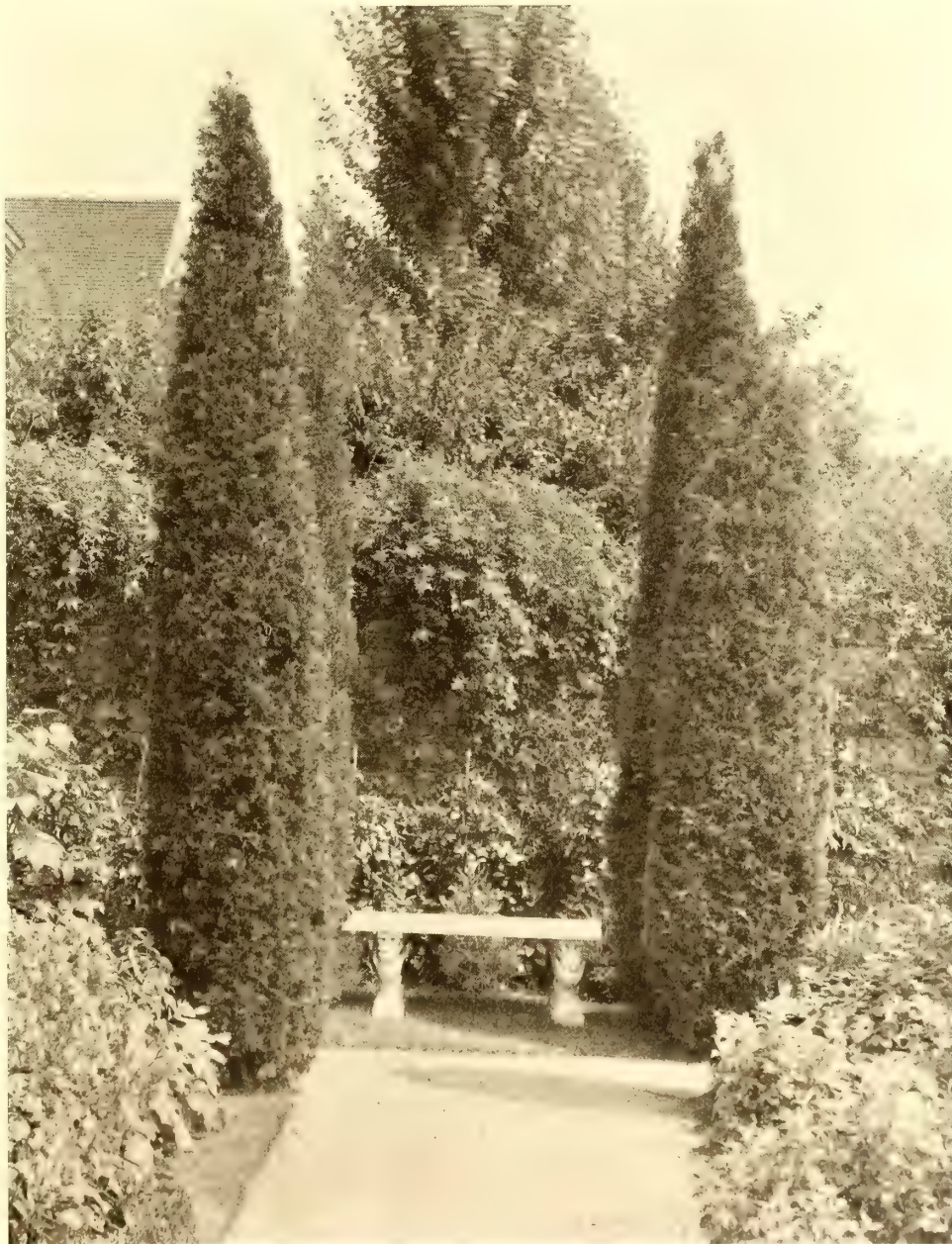
Immediately in front of the house the space has been cleared for an open forecourt. At either end of the driveway are stout stone piers, surmounted with huge Italian earthenware vases. A lawn stretches from the road, and on the edge of the plateau is a balustrade beyond a row of stateily cedars. The view from here, and, indeed, from any part of the front of the house, is almost limitless in extent, looking across valleys and hills to still further hills in the furthest distance.

Surely if ever a house demanded picturesque treatment in its design it is one situated as this one is. The problem has been adequately met by the architects, McKim, Mead & White, of New

York. There is a delightful harmony in what, at first glance, is the apparent disarray of these varied gables, these differentiated forms, these terraces and porches, the multiform front, with its servants' wing deflected at an angle, and its recessed final wing on the further end. There is true variety and picturesqueness here, all obtained by perfectly legitimate means, and all harmoniously composed and united in a single design, every part of which has its own story to tell; tells it fearlessly and distinctly, and yet with perfect regard for its immediate neighbor and the harmony of the whole result.

The house stands upon a somewhat high base, with a broad flight of stone steps leading to the entrance doorway. The terrace there is unroofed, save for a small marquise immediately above the door. On either side the base is thickly embedded in shrubbery; vast masses of forsythia grow here, and later in the season their dense green leaves are enlivened by clumps of golden glow. The shrubbery is no mere screen for the base of the house alone, but is a definite part of the systematic planting which has done so much to improve and beautify these splendid grounds.

Although the entrance hall includes a space of some size and is handsomely furnished, it is an entrance hall pure and simple. It is rectangular in form, with a cut-off corner



Two of Nature's Exclamation Points

for the chimney, and a passageway opposite the door that leads to a second door at the back which opens upon an enclosed court. Both hall and passage are floored with Moravian tiles, very delightful in texture, and with exactly the right amount of variety in color and in pattern. There is a low-paneled wainscot of wood, painted white and a delicately detailed cornice; the wall between these parts is covered with a tapestry in which russets and dark blue shades predominate. The door frames are delicately molded, and are appropriate backgrounds for the curtains hung before them—very dark blue with borders of gold. The stairs, which originate at the beginning of the passage, have polished oak treads and white risers; they are covered with a bright red carpet; the balusters are white and the rail mahogany.

The mantel, in the corner of the hall, is a furnishing of quite unusual interest. It came from No. 24 Beach Street, New York, a property formerly owned by Mr. James Pyle,

is really a portion of the first great room, separated from the larger part by free standing columns. The space beyond is the billiard-room. Its treatment is monumental, the walls being spaced into panels by pilasters. The color scheme is red and white, the pilasters, columns, wainscot, cornice, door and window frames and ceiling being white, and the walls red. The cornice is elaborately detailed and the ceiling is beamed and paneled. The mantel is of wood, with a mottled red marble facing; there are pilasters at each end which enclose the over-mantel. The door curtains are of red velvet, with plain bands of gold: the windows have white lace curtains.

Beyond is the living room. It is an apartment of great size and most thorough delight and comfort. The colors are white and green. The walls are paneled by the pilasters of the window frames and free pilasters which support the great beams of the ceiling. They have a narrow base, but an enriched and detailed cornice; the space between being



The Front of the House Presents an Interesting Grouping of Parts and Dormers

and which was built and occupied by Mr. William Kemble in 1825. It is a beautiful piece of fine old marble work and was imported by Mr. Kemble from Italy when his house was built. The upper hall, which the stairs approach through a great open area, is covered with Oriental scenic paper, very soft in coloring and very appropriate to the Colonial setting of the woodwork.

On the left of the hall is the reception-room. Its prevailing color is pink. The walls are covered with a pink damask. The curtains, both at doors and windows, are of pink, lined with white, with white borders decorated with pink flowers and green leaves. The hardwood floor has an inlaid border. There is a low white base mold and a small cornice; the ceiling is plain without ornamentation. The furniture is gold with pink damask coverings. The mantel is of white marble.

A single door serves as the entrance to the reception-room but further down the passage a double door gives entrance to the other rooms on this side. One enters immediately into what is apparently a passageway but which

hung with green. The pilasters are finely detailed with ornamented panels. The ceiling is white and is divided into three great panels by transverse beams, the central one being the smallest. All three are decorated with an elaborate geometric design in interlaced curves.

In the center of the further longer wall is the fireplace. It projects considerably into the room and is a vast cavernous opening. A richly carved mantel shelf is strongly projected forward and is supported on deep consoles. On two sides of the room, opposite the fireplace, and at the end, are built-in bookcases, painted white, with glass shelves. The door curtains are of green velvet, with gold bands; the window curtains of green damask with white sash curtains. The hardwood floor is covered with an immense red rug. The furniture is chiefly green, of velvet and damask.

The dining-room is on the right of the entrance hall and extends from the front to the back of the house, being lighted on the two ends. It is a room of immense fascination. The walls are clothed throughout, save for a deep green frieze, with a paneling of sand-blasted oak. This method is so



A Flight of Stone Steps Leads to the Terrace and the Main Doorway



The Mantel in the Entrance Hall Was Taken from an Old New York House



The Entrance Hall Is Paved with Moravian Tile. The Woodwork Is White, the Walls Tapestryed



The Living-room Is Furnished in Green and White, with a Red Rug



The Living-room Has the Charm of Great Size and Comfortable Furnishings



The Dining-room Is Paneled in Sand-Blasted Oak and Has a Green Frieze and Geometrical Ceiling



The Formal Garden Occupies a Terrace on the Hi



and Is a Brilliant Mosaic of Flowers and Shrubbery



The Formal Garden Occupies a Terrace on the Hillside and Is a Brilliant Mosaic of Flowers and Shrubbery

comparatively new that it may be stated that the woodwork is first completely put in place, and then sand blasted by the process more familiarly applied to the exterior of buildings. In Mr. Pyle's dining-room the whole of the woodwork, including both walls and mantel, has been subjected to this treatment. It has a Caen stone facing, with upper panels divided by small decorated Ionic columns. The front of the room includes a bay window, and here are Ionic columns and pilasters, while pilasters alone separate the space before the back windows, where a group of three look out upon the rear court.

The green frieze is largely filled with terra cotta casts of reliefs and a great sculptured flower stand is in the bay window. The furniture is covered with green and silver leather, and above the dining table is a lamp with a vast green mosaic shade. The sideboard is identical with



The Reception-room Is Furnished in Deep Pink

the structural woodwork of the room. The hardwood floor has a green rug, and the curtains are of green velvet with green bands. The ceiling is treated with a geometrical design, the curves of which are enriched with delicate foliage.

Beyond the dining-room, on the front of the house, is Mr. Pyle's study. The woodwork and furnishings are identical with those of the dining-room. The floor is brick: the walls have a high wainscot supporting a tapestry frieze. Bookcases

are built in along the longer wall, and the ceiling is paneled. The fireplace is of Caen stone embedded within wood.

More than one reference has been made to the open court at the back of the house, and it is time that it is visited. It is partly enclosed by the house, partly by the walls. It is floored with brick, and in the center is a square pool containing a fountain. The outer walls are of stone, that immediately in face being at the base of the hill. Here it is



The Forest of the Hillside Comes Down Almost to the Edge of the Terrace Behind the House

capped with a balustrade; in the center is a lion's mouth ejecting water into a white marble basin let into the floor at the base. Above are more walls and steps, with a central path. Then the hillside, covered with the forest trees and wood undergrowth, all rising sharply upward. To the right is a door in the wall that admits to the kitchen yard, with the clothes yard beyond, all amply hidden from the paved court within. Here are the servants' quarters arranged on the most ample scale. Inwardly is a pantry adjoining the dining-room; the kitchen, tile paved and with an immense range; then the servants' dining-room, papered in blue, and very charmingly furnished; and then, last of all, the laundry.

All around the brick court, next to the house, are pots and tubs of growing plants; and in a paved passage, that passes below the windows of the billiard and the living rooms, are rows of boxes with huge tender trees and shrubs. One turns the corner, and stands below the great two-story portico with which the house is finished, and which directly overlooks the formal garden below and beyond.

Very beautiful it is here, beautiful naturally and with the added charm of masterly expert gardening, designed, it should be said, by Mr. D. W. Langton, landscape architect, of New York. The stretch beyond is so broad and spacious that one does not at first realize that this garden has been made on the side of the hill. It is true that the garden is long; that is to say it stretches for some distance to the belvedere with which it is closed at the furthest point. But the plan has been so admirably worked out, that it is the beauty alone one feels, not questions as to how the garden was formed.

Immediately below the portico is an enclosed space of grass, with a low hedge all around it. The formal garden is beyond, enclosed within walls, with high piers at the entrance to the upper path that runs straight ahead to the end. On the hillside is a hedge; on the other, which over-

looks the garden below, is a balustrade, with standard catalpa trees planted in wide pairs, with marble benches between them. The hillside to the right is grassed, with masses of rhododendrons and other trees and shrubs, and the forest trees above. In the center of the hedge is a great burst of cannas, with a semi-circular expansion of path and bounding wall. Over the wall peep peony leaves, and beyond are thick growths of hydrangeas, massively a-bloom, and bordering a grass walk upward to the woods. The woodside beyond is crowded with lofty shrubbery, and then, at the end, is the belvedere, semi-circular in form, of stone and wood, affording a beautiful outlook over the garden of Mr. Charles W. McAlpin below.

From this path the formal garden may be viewed below, where its rich beauty of floral growth thrives in the warm sun. Formal and rigid in its design, that is to say, arranged in squares and rectangles, it is gaily planted with blooming plants. In the middle space is a large rectangular basin, containing joyful little cherubs and many water lilies. Bay trees in earthenware pots stand around it, with other trees in tubs at the path entrances. The planting throughout is delightful, the flowers being arranged in border beds, some with low box borders, some without. And here every imaginable kind of herbaceous perennial is found: iris, lychnis, helianthus, lilies, phlox, chrysanthemums. Along the retaining wall, with which two sides are enclosed, are loftier plants: roses and dahlias, peonies, golden glow—a veritable riot of color, beautifully arranged and beautifully grown. And the situation lends, as much as any site can, to the beauty of the garden; for above is the thickly wooded hillside against which the house and garden are built; and below is the sudden dip that isolates the garden from the world beyond, but which is very lovely to look upon, very varied to see, infinitely interesting to watch. And then one turns back to the flower garden from which all this beauty can be seen with a rare sense of appreciation of the beauty that is just here.

The Vital Forces of Civic Betterment



CIVIC betterment, municipal embellishment, public art—call it what you will—is the newest and latest form of artistic endeavor. And it might truthfully be called the most popular, for such it seems to be in many senses. Certainly it is the form of art most now talked about, and if the results achieved to date have not been in direct proportion to the discussion it has caused, that has been more due to the brief period under which it has been discussed and the many practical difficulties that attend realization than for any other reasons.

The agencies which are now interested in civic betterment are very numerous. Many of them have no art interest whatever, but are concerned with practical matters of health and sanitation which are obviously of greater importance than any questions of beauty or pure embellishment. Transportation interests are also vitally interested in civic betterment, interested not only for the improvement of existing facilities, but interested also in the future growth of the localities they are serving, whose own future will depend so largely upon them.

The artistic aspect of civic betterment is, as a matter of course, its least important side, the side least needed, which ministers least to the citizens' necessities, and which, never having been very prominent in contemporary life, seems the one aspect that can be most easily spared. Yet this is the aspect that has been most prominently brought forward and has been most insisted upon. On the whole this has been

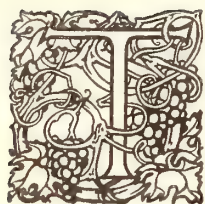
a very fortunate circumstance. It is the artistic, the visible aspect of civic betterment that has won its greater number of supporters. People who could not see the value of a certain kind of sewage disposal—which they would never see—could immediately recognize the merits of a public work of art—which they could see—stood up for the edification of all beholders. There has been no loss in the insistence of the art point of view in the betterment campaigns. It has added a host of interested supporters to the movement, and given it a distinction it might otherwise never have had.

Historically the artistic element stands easily first, for the whole agitation began in urging the claims of a better outward appearance and in setting forth the merits of certain works of art which were desired for certain localities. It was very early seen that the setting up of a single monument, the purchase of a painting, the plea for more beautiful flower gardens, and other like suggestions were not sufficient. Public betterment, it was found, must be general betterment. Those interested in public health urged the greater importance of their own specialty which they justly thought should be developed before any funds, public or private, were expended on ornamental and artistic matters.

The movement for civic betterment has, therefore, taken on a very much broader view than at first seemed possible. It is now concerned, practically, with every public aspect of civic life. And what is very much more valuable, most of the vital forces which are related to this work are now more or less closely joined in it. The beginnings of a great work have been well started in an effective way.

The Nuptials of the Flowers

By Percy Collins



THAT plants marry and are given in marriage is a fact well known to all students of botany. As the late Grant Allen quaintly put it: "Flowers are the husbands and wives of plants. And in some cases the sexes are as fully separated as in birds and beasts; when once you know them, you can distinguish at sight a male or a female flower as readily as you can distinguish a bull from a cow, or a peacock from a peahen." But as the subject of plant-marriage may be quite a novel one to many readers, a few words of introduction may not be out of place.

Most people know that a typical flower has at least three parts, or three sets of parts. These are the brightly colored petals, the stamens covered with yellow pollen-dust, and the pistil (or pistils) which usually occupies a central position. For the moment we may disregard the colored petals: they have no direct bearing upon the question of plant sex. It is the stamens and the pistil which represent the male and the female portions of the flower. In order that the seed of the plant may be rendered fertile, it is necessary for some of the golden pollen of the stamens to come in contact with the pistil.

In the case of certain flowers, however, we find only two, instead of three sets of parts. The beautiful begonias, for example, are flowers of this kind. Certain of the blossoms are wholly male, while others are wholly female, and there is no combining of the sexes in one bloom after the more common plan. If the reader will examine a begonia plant



1—Female and Male Flowers of the Begonia

(Fig. 1) he will readily distinguish between the two kinds of flowers. The male flower has (usually) only four petals surrounding a number of pollen-coated stamens; the female flower has five petals, a center of curiously twisted stigmas representing the pistil, and (behind) an enlarged ovary in which the seeds will be developed.

Now in the case of plants such as this, with the sexes supported on separate stalks at safe distance one from the other, the question arises: How is the pistil of the female flower pollinated? The gardener gets over the difficulty by using a camel's hair brush, by which he carries the pollen from the stamens of one flower to the pistil of another. But in a state of nature, and in the desolate regions where many of our most beautiful hothouse flowers grow wild no kindly gardener goes from plant to plant with his brush.



2—"Peacock" Butterflies and Scabious Blooms

Moreover, Nature evinces a decided objection to what is called "self-fertilization." Often, in cases where both pistil and stamens are found in the same flower, she has so disposed these organs as to render the pollination of the former by the latter impossible. By some means or other pollen must be brought to the pistil from another bloom, or the seeds will not set. It is clear, then, that if cross-fertilization is to be secured at all, it must be brought about by some agent or agents quite distinct from the plants themselves.

Such an agent is the wind, which wafts the pollen in a dust-like cloud across the country-side, applying a little to the purpose for which it was produced, and wasting far more than is used. Many kinds of trees and grasses are thus wind-fertilized, and they possess, almost without exception, inconspicuous flowers—i. e. flowers quite perfect as to their essential organs but devoid of brightly colored petals. Flowers possessed of conspicuous petals are generally, if not indeed invariably, cross-fertilized by agents other than the wind. In fact, as the reader will shortly perceive, the bright petals have an intimate connection with the problem of cross-fertilization. With the nuptials of these conspicuous flowers—the only flowers, indeed, which fall within the popular application of the word—the present article deals.

It may be said at once that the chief cross-fertilizing agents of the flowers are insects. No group of living crea-



3—Umbelliferous Blooms Crowded by Small Beetles

tures is better fitted for the task. Many kinds of insects spend practically their whole lives in passing from one flower to another. The hairs with which the bodies of many are covered are well adapted for collecting and retaining the pollen-dust. Finally, many insects have a habit of visiting different individuals of one kind of flower in succession, even to the extent of neglecting the showy blooms of other species which may come in their way.

In all likelihood, insects first began to visit flowers as mere robbers. That is to say, they came to eat the pollen. This may have been at a period so remote, geologically speaking, that flowers as we know them, with brightly colored petals, may not have existed. Some of these grains chance-collected on their bodies, the insects would almost certainly deposit upon the pistil of the next bloom visited; and if this bloom happened to belong to the same species as that from which the pollen was carried, cross-fertilization would be effected. Thus, these chance transfers of pollen from one bloom to another would benefit the plants concerned, and by the law of natural selection, chance would tend to strengthen into certainty.

Through what stages this wonderful evolutionary process passed it is not possible to say with exactness. The secretion by the plant of nectar, or honey, marked a definite step in advance. The sweet liquid constituted a counter-attraction to the insects, which thus devoured less of the valuable pollen, albeit they did not carry away less of it on their bodies. Indeed, at the present day, many kinds of insects visit flowers for honey alone and never eat pollen. Thus, the flowers have, in effect, changed the tastes of their insect visitors in order to promote their own ends.

Another great step in advance was the production by insect-fertilized flowers of brightly colored petals. These showy banners act, as it were, as advertisements. They say to the insects: "Here is nectar; come and sip my sweets." Moreover, they doubtless constitute a time-saving device, rendering the flowers more easy of discovery by the insects. Also, they form a ready distinction between flowers of different species; and this is important, as it is obviously necessary, if cross-fertilization is to be secured, for the pollen from one flower to be transferred to another of the same kind. It has already been said that many insects systematically visit the flowers of one species to the exclusion of others from their "visiting list."

We have now, therefore, formed a definite idea of the manner in which flowers are aided by their insect visitors, and of how these visitors are encouraged and entertained. But we are really only on the outskirts of a very wide and a very wonderful subject. There is, of course, a more or less haphazard cross-fertilization of flowers by insect agency. Thus, butterflies often visit flowers to suck the nectar, and carry away with them a quantity of pollen on head and thorax. Many butterflies prefer certain kinds of flowers to others. "Peacock" butterflies (Fig. 2), for example, love especially the various scabious blooms and their allies. Again, one often sees certain flowers crowded by small beetles, the insects being at times almost smothered in the pollen (Fig. 3). This is especially the case at certain seasons of the year, with the large, flat heads of umbelliferous blooms. As the insects fly constantly from one flower head to another, they transfer quantities of pollen.

But observation has proved that certain flowers are especially modified in anticipation of the visits of special kinds of insects, and that these modifications have, in not a few instances, been developed to an extraordinary extent. Therefore, if we wish to form a correct mind-picture of the nuptials of the flowers, we must examine at least a few of these special cases. We may begin with what has been aptly termed the "brush and piston mechanism," as seen in the cultivated pea and allied blooms. Consideration of space



4—Diagrams Showing the Percussive Mechanism of the Sage Bloom



5—Honeysuckle Visited by Dusk-flying Hawk Moth



6—Tobacco Flowers Visited by Very Long-tongued Moth, a Well Known Central American Species Known as *Phlegethontius Nosticus*



7—Nasturtium Visited by Hawk Moth

will not allow us to discuss the remarkable modifications which are exhibited by highly specialized flowers when they are compared with those of a more simple type. We must just, as it were, take the flowers for granted and as we find them, and concentrate our attention upon their mechanical working in relation to their insect visitors.

To begin, then, with the pea. We see that a pea blossom about to be visited by a bee has a large standard petal as a background and four pinched-up petals below, which act as a kind of platform on which the insect is to alight. But this platform, or stage, has a curious mechanism beneath it. This consists in a kind of pocket, formed from two cohering petals, in which are the stamens and pistil of the flower. Into this pocket, which has only one tiny hole at the tip, the moist, sticky pollen is shed by the anthers. Here it lies secure from robber insects until a bee of honest intentions comes to gather honey. As soon, however, as the insect settles upon the platform of the flower, the piston mechanism comes into play. His weight depresses the petals; but the style or pistil, being rigid, does not yield to the pressure, and is therefore forced through the small hole at the tip of the pollen-pocket, discharging a quantity of pollen on to the bee's breast. The insect now proceeds to rifle the flower's store of honey. But it has already been converted into a carrier of pollen, which it will bear away to the next pea flower it visits. The common sage of our gardens has a wonderful, though somewhat minute, contrivance which may be termed the "percussive mechanism," because it works in much the same manner as the trigger of a gun. A reference to the annexed diagrams (Fig. 4) will enable the reader to appreciate this fact. The flower's store of honey is, of course,

deep down in the tube of the corolla. The visiting bee, in his struggles to reach the sweets with his long tongue, brings his head into contact with two little knobs. As soon as this happens, the two stamens—which are hinged and poised in a very remarkable way—swing over, bearing the pollen-bearing anther-lobes down upon the bee's back and depositing thereon a quantity of their golden dust. Thus the bee is converted into a pollen bearer.

It now remains to be explained how this pollen is transferred to the pistil of another bloom. The above description refers to the visit of a bee to a newly opened sage-flower, when the stamens alone are fully developed, the pistil being packed away in the hood of the bloom. Later, the pistil grows and curves over, bringing its forked tip into such a position that the back of a visiting bee is certain to touch it. This is known as the "female stage" of the flower; and if a bee comes to it from a blossom in the earlier "male stage" it is obvious that cross-fertilization must take place.

The well known snap-dragon is an interesting type of flowers which possess a contrivance for repelling undesirable



9—Wild Arum. Three Flowers Dissected to Show the Three Chief Stages

insect visitors. Lord Avebury has called it "a strong box of which the humble bee only has the key." In order to reserve itself for the humble bees, the snap-dragon has made itself into a strong box. The lower lip of the flower presses closely against the upper—so closely, indeed, that all smaller insect visitors find themselves quite unable to force an entrance. But the big humble bee, with superior strength, readily forces its head and shoulders between the "bull dog" jaws, gathers the nectar, and flies away with the yellow pollen dust upon him to effect the cross-fertilization of the next snap-dragon he visits.

The problem of shutting out undesirable visitors is solved by many other flowers in another interesting way. They keep their store of nectar either at the extremity of a long, narrow tube, or of a spur. The passage is oftentimes so narrow that it is quite impossible for even minute insects to crawl down and rifle the sweets; they can alone be reached by such insects as possess long tongues, or trunks. As an instance of the above we may take first the honeysuckle. Despite popular conviction to the contrary, these sweet-scented flowers are not for the bees, but are adapted for fertilization exclusively by long-tongued crepuscular or night-flying moths. The flowers bloom chiefly during May and June—at the very season, that is to say, when hawk moths are abundant. The moths pay their visits on the wing, insert their long tongues into the tubes, and incidentally brush away pollen



8—Diagrams Showing the Mechanism of the Common Spotted Orchid

from the stamens upon the soft, velvety scales of the head, or upon the tongue itself (Fig. 5).

It becomes obvious from what we have already seen that by an increase in the length of its tube a flower might greatly restrict the number of insects capable of reaching its nectar. By this means, a few moths—presumably most fitted to carry on the cross-fertilization of the particular plant in question—might be given the exclusive right of visiting such a bloom. As a matter of fact, this state of things is actually existing. Species of hawk moth not a few have tubular tongues, or trunks, twice and even thrice as long as their own bodies, and such moths visit flowers whose nectar is stored at the extremity of abnormally long tubes. A flower of this kind is that of the *Nicotiana*, or tobacco-plant, certain varieties of which are frequently grown in gardens (Fig. 6). This blossom, too, affords an interesting example of those plants which reserve themselves exclusively for crepuscular or night-flying moths. Such flowers are usually either white or yellow—the reason for this being obvious in that bright colors lose their conspicuousness at the approach of twilight, and therefore fail to be of use in advertising the whereabouts of

It will be noticed that the dark veins with which the paler ground-color is traced all converge about the mouth of the spur. These lines are known as "honey guides." Their purpose is to assist the moth in discovering quickly the narrow entrance of the spur into which its long tongue must be inserted.

Of all flowers, those which exhibit the most wonderful and varied contrivances for securing cross-fertilization are the orchids. Space will not allow us to dwell long upon this fascinating subject, but one or two points must receive brief notice. We may select as a special instance the common spotted orchid (Fig. 8) of English meadows, as it is typical of other orchids in different parts of the world. The blossom possesses a spur, and in this the nectar is stored. Stamens, as such, are non-existent; but their place is taken by two "pollen masses." These pollen masses are stored in two little bags or pockets. Their stalks are sticky, and are so placed that they come into contact with the bee's head as he is inserting his tongue into the spur in search of honey. In fact, they become gummed to the insect's head; and when it leaves the flower, the pollen masses are dragged from



10—Wild Arum



12—Humble Bee Visiting
Pea Blooms



11—Humming Bird Visiting Fuchsia

the flower. At noon the tobacco flowers are all tightly shut up and look quite withered; but at the approach of dusk each one holds up its head, expands, and becomes a bright star, readily distinguished at a distance long after the reds and blues and purples of other flowers have faded away in the gloom.

Another common flower well worthy of special observation is the common nasturtium (Fig. 7), better known, perhaps, as the Indian nasturtium. The blossom is wonderfully adapted for the visits of a flying insect possessing a long tongue. In the first place, we see that the calyx is modified to form a long spur; and at the extremity of this the nectar is stored. This secures the flower from invasion by all short-tongued flying insects; but in order that minute creeping intruders, such as ants, may be kept at a distance, the flower has a kind of hedge or fence running right across the three lower petals. Ants find it impossible to cross this barrier, nor is it any easier for them to gain the interior of the flower by means of an attack from the rear.

The two upper petals of the *Tropæolum* are to be regarded as its banners of welcome and advertisement to its moth visitors. They supply a good instance, too, of a particular kind of marking very common among certain flowers.

their pockets and carried away. At this stage they stand erect on the bee's head. But as the insect passes rapidly through the air, the pollen masses dry, and their stalks bend over, so that when the bee visits the next orchid-bloom they are pointing directly toward the gummy surface of the stigma (or pistil) which has its place just below the pollen masses. With this they come into contact, adhere, and thus pollination takes place.

Many flowers treat their insect visitors very badly. There are certain kinds of *Arum* which deliberately entrap small flies which come to them. The structure of these blossoms is peculiar. There is a large pale leaf, known as the spathe, with a curious liver-colored club within. Those parts do not really represent the flower at all; their purpose is to attract inquisitive flies. Down below, on the stalk of the liver-colored club, the real flowers are arranged. Lowest are the females, like a number of little knobs; next are the males; and above these, at the entrance to the bulb portion of the spathe, are a number of abortive flowers which look like so many hairs (Figs. 9 and 10).

When flies visit a newly opened arum-bloom, they force their way past these hair-like flowers, and find themselves in a roomy chamber. Probably some of them have come from

another arum and have brought pollen with them; in which case they fertilize the knob-like female flowers as they buzz about. But when they try to return to the open air they find themselves unable to do so. The hairy circle acts as a kind of lobster trap, and they struggle in vain to pass it.

They are, in fact, held prisoners for many hours until the male flowers come to perfection and shed their pollen. Then, and not until they are well covered with the yellow dust, are they able to depart. For not until the male flowers have ripened does the spathe expand and the hairy trap wither sufficiently for them to pass out of their prison. The method of attraction employed by the Arum raises another point of interest. We noticed that it does not employ bright colors, but relies upon a liver-colored, meaty-looking club. The reason for this appears to be that it does not cater for honey-loving insects, but for small flies whose chief delight is decaying meat or other carrion.

In the tropics a number of large flowers attract carrion-loving insects. They have blossoms which look like decomposing meat, and their smell (to human nostrils) is disgusting.

Yet just as larger animals feed on vegetable and animal matter far beyond human consideration and utilization, so there are insects that are both attracted and fascinated by flowers that, to human senses, are filled with loathsomeness. It seems strange that nature should thus provide an equalization in consumption, yet it is a phenomenon of frequent and quite common occurrence. Doubtless it is a mere difference in point of view.

In conclusion, it must be added that insects are not the only bearers of pollen from one flower to another. In tropical and sub-tropical countries no small part of this task is

accomplished by flower-frequenting birds. Of these, humming birds are notable examples (Fig. 11). Many native Southern and Central American flowers are specially modified for cross-fertilization by bird agency. They are usually pen-



13—The Last Flowers of the Garden, Balsams, Are Visited by the Bee

dent, have no alighting platform for the convenience of insects, and are commonly red or scarlet—colors for which humming birds show a marked partiality. The fuchsia is a good type of bird-fertilized flowers in general.

Walls and Their Meaning



HE interior walls of a house are the background to the life led within them. That they are enclosures; that they separate the rooms from each other; that they afford space for the display of pictures; and that they are colored in one way or another with paper, silk, cretonne, denim, tapestry or other material, is likewise true. It is true, also, that walls have a structural significance, and that without them the building can not stand erect; but all these matters are insignificant compared with the more important fact that the walls are backgrounds to human life. They thus have a social as well as an artistic significance, and need to be considered from their social side as well as because of their utilitarian qualities.

The walls are not only backgrounds to life, but they are backgrounds to what is placed within the rooms they bound, and their esthetic treatment is usually—in the domestic dwelling of to-day—considered from this point of view. And this aspect is an important one, for a true comprehension of this aspect of walls means their relegation to their proper function in the art qualities of the house. It is as backgrounds they should be treated.

A complete knowledge of the contents of the room and its use is essential to any successful wall treatment. If the room is a public or general apartment, in which the family gather frequently and where guests are entertained, a richer treatment is allowable than in those rooms set apart for private and personal use. This is a fundamental proposition adhesion to which will greatly clarify the difficulties of wall decoration. And it is quite as essential that a proper relationship be maintained between what is placed within the

room and its wall treatment. A room richly furnished, on the walls of which it is proposed to place a considerable number of pictures, paintings, photographs, prints and the like, will require a much more modest wall covering than might be permitted in a room in which the furnishings were comparatively slight. In the former case the walls do not need to be felt; they certainly do not need to be emphasized; they have a quiet indispensable part to take in the decorative scheme. The spectator is aware that there are walls, but he does not need to be informed of their presence by the walls themselves.

The case of more moderately furnished rooms is somewhat different. A certain completeness of effect, in which walls, curtains, furniture and rugs have each a part, seems indispensable to Western eyes. The cool, slenderly furnished rooms of Japan seem bare to American eyes, and are bare; we can not go to that extreme; but there are many excellent American rooms, quite sufficiently furnished, that are, nevertheless, poor in contents. Such rooms require a rich wall covering to add to the furnished effect. This, of course, is dependent on the fact that there are no pictures or only a few. Strong figured patterns do not go with pictures, and should be avoided when any dependence is placed on them for room decorations.

Individual taste, when it has been properly trained, is the safest of all guides for every part of household decoration. Few parts of the furnishings are more important than the wall coverings. Even the cheapest sorts of papers entail expense, not only in putting them on the walls, but in the fuss and labor they entail. One may change furniture more readily than they can the wall coverings, and it is always the wisest to be thoroughly sure that the result will be good and satisfactory before proceeding with any installation.

A PENNSYLVANIA FARM HOUSE

By Francis Durando Nichols



How It Was Transformed Into a Beautiful Dwelling and Its Grounds Into a Delightful Garden



WHEN Count Mora-de-Mora purchased his farm at Villa Nova, Pa., with its simple stone buildings, it had the aspect shown in the illustration on page 220. The buildings were deserted and the land had been so neglected that the whole place seemed to take on an atmosphere of absolute desolation. The main building, that is, the house, was built of stone and was found too good to tear down; the small carriage-house, also built of similar stone, presented such a fine example of old stonework that it, too, was found too good to raze to the ground. The buildings were typical of the old farms so frequently seen along the rural highways of Pennsylvania. The betterment of the property and buildings constituted the problem that confronted the owner, and he subsequently turned the project over to his architects, Messrs. Bailey and Bassett, of Philadelphia, for the purpose of having them revise and renovate the estate.

After a thorough examination, it was found that the buildings were of such a character that they really seemed to form a nucleus for a future development which was immediately grasped by the architects, and the plan formulated by them was to build the alteration in such a manner as to make a connecting link between the old house and the carriage-room, the result of which is illustrated.

The old house was built in sections, as was the custom in pre-revolutionary times. The site upon which it is built was once part of a Welsh settlement, and it overlooked the old Gulf road which leads to Valley Forge. It is within sight of the old Gulf Church where Washington and his men camped for a week previous to their march to Valley Forge.

The original house, consisting of a large living-room on the first floor and two bedrooms on the second, was built by Phillip Krickbaum, in 1730, as is marked by the old stone in the peak of the gable. Besides the date 1730, the initials P. K. and a likeness of the man cut in the stone are also to be found, a form of record sometimes used but not frequently seen. This is really a peculiar and interesting stone. The second section of the house was added in a duplicate form of the first, as shown by the plan, and is dated by its stone in the peak of the gable, 1781. The third section was added in 1790, by the date found in another stone placed in the wall.

The entire absence of ornaments of any kind and the solidity and permanence of the exterior walls rendered the modernizing of the house comparatively easy. The amount of the change in the original building has not been excessive, and the scheme accepted was one which could be built in order to take in the carriage house as a part of the improvement. This was done and the whole carried out in sympathy with the subject and its surroundings.



The Laundry and the Massive Wall Make a Connecting Link Between the House and the Garage

The main walls of the house were retained and it was added to by building on a dining-room, butler's pantry and kitchen and its dependencies. The main walls of the house were in very good condition. The end wall presented such a fine piece of stonework that it was thought best to leave it exposed to view. The remainder of the building was treated as it was in its former day, by being given a coat of stucco, leaving the old stone quoins

at the corners of the building, and massing the whole into the composition of the newer building. The roof was shingled and put in a first class condition. The front chimney pierces the roof and is built of stone in harmony with the wall at this end of the house. A terrace, laid with brick in herring-bone fashion, is built around the house; a small covered porch is placed at the entrance, and a living porch extends across the garden front of the main building. The



The Old Farm House as It Appeared Before the Alteration

old living-room of the Colonial era where the family life centered, where the cooking and eating and visiting was done, was transformed into a modern living-room, where social intercourse only is considered — thus is rendered a true story of the evolution of the living-room. The great open fireplace, under which one may stand, is furnished with the same old iron crane from which polished brass pots swing, and it has a hearth

laid with selected stone. Seats are placed on either side of the fireplace, over which are niches built in the walls for the purpose of holding the mugs of good old punch, which was a complimentary custom in old days. The trim of the room is painted old ivory white, while the walls are covered with a dull green covering.

Crossing the staircase hall, another living-room is reached, which was formerly the kitchen of the original house. This



The Old Farm House and Its Grounds After Their Transformation



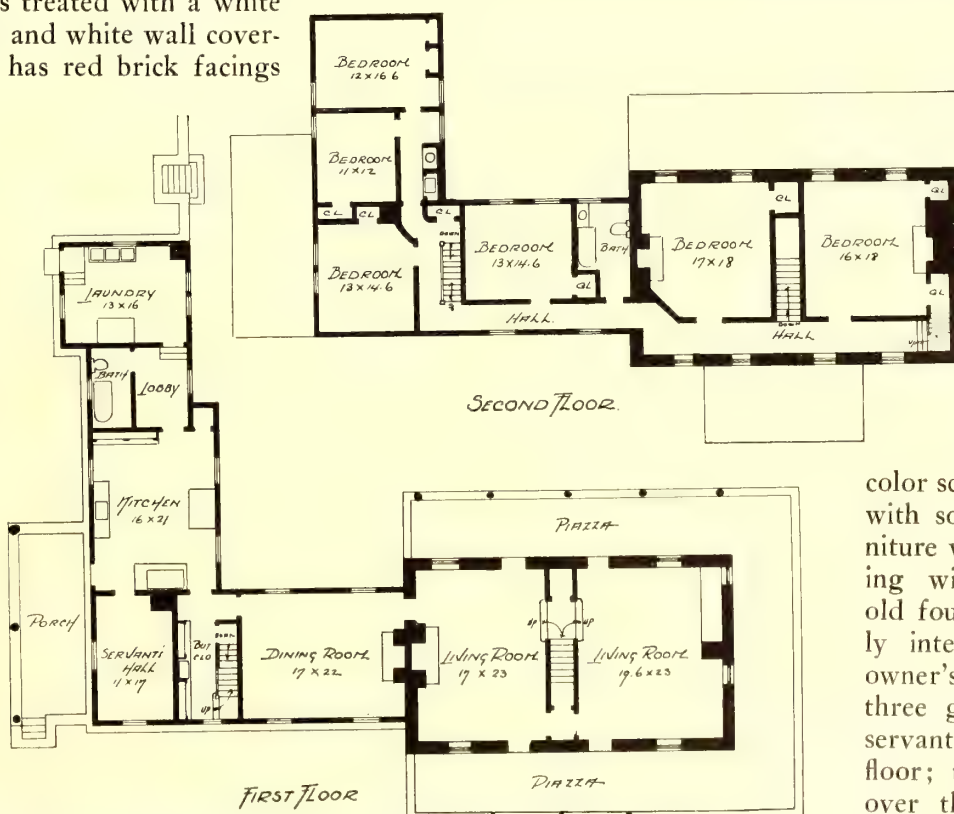
The Sides of the Main House Are Covered with Stucco, Blending Into the Mass of Stucco Work of the Newer Addition

room has a white painted trim and a crimson wall covering. In the addition was placed the dining-room, which has windows on either side of the room, insuring a good cross ventilation. This room is treated with a white painted trim and a yellow and white wall covering. The open fireplace has red brick facings and hearth and a mantel of Colonial style.

A door opens into the butler's pantry, which is fitted with drawers, dressers and bowl complete, and contains the servants' stairway to the second story and to the cellar. A second door opens into a kitchen which also has windows placed on either side, thereby maintaining a cool and pleasing kitchen for working purposes. This kitchen is furnished with all the best modern improvements complete. There is a servants' hall off the kitchen which is used for social and dining uses.

A porch is also provided for the servants. Beyond the kitchen is a servants' bath-room and a laundry, both of which are fitted up with the usual fixtures respectively. A walk connects with the old carriage-house which was re-modeled into a garage with satisfactory results.

The second floor is treated with white painted trim and walls decorated in a particular color scheme for each room. The owner's room is treated in a pink color scheme and is furnished with some old Colonial furniture which is quite in keeping with the house. The old four poster is particularly interesting. Besides the owner's room, there are three guest rooms and two servants' bedrooms on this floor; the latter are placed over the kitchen extension. There is also a bath-room on this floor furnished with



The Heavy Black Lines Show the Old House, While the Lighter Lines Give the Added Extension



The Old Fireplace of the Original House Is Maintained with Its Flat Stone Hearth

tilled wainscoting and floor and porcelain fixtures with exposed nickel-plated plumbing. The third floor contains one bedroom and trunk room, all the space being utilized.

The informal garden is quite the feature of the estate and is laid out in close relation to the house, which has all of its living-rooms overlooking the grounds and gardens. It is reached from the living-porch and by crossing the lawn to the terrace wall, the access to the top of which is obtained by stone steps. On either side of these steps are grouped a graceful cluster of growing plants and shrubs, blending themselves well with the growing vines on the terrace wall.

The grounds about the house have been well planted and have been the means of softening the hard edges and corners about the place down to a pleasing landscape.

An unusual feature of the estate is the farm buildings, which are placed across the road from the house. It was quite the custom, in Colonial times, for the farmers to build their farm buildings opposite their houses, that is, of course, where they happened to own both sides of the road. In this particular case, as shown by the custom of those days, the site chosen was one which had natural features, that is one which had a receding decline, so that the barn could be built with an access direct from the roadway, while by a slope of a hill, and a cut into its side, a cellar was obtained in which provision was made to house the cattle and horses, and also for the storage of farm

produce, leaving the remainder of the building for the storage of feed and hay. This was the barn found upon the estate. Its location not being objectionable, and its condition being such as to influence the maintaining of it, the architects decided to renovate and transform it into a modern stable. The timbers, upon examination, were found to be intact, so the principal work to be done to the exterior was to clean up its walls, put a new roof on and give the whole building a coat of whitewash. The stable and carriage rooms were placed on the main floor, and each have walls and ceilings, ceiled with narrow-beaded stuff. The carriage room is provided with a carriage wash, harness room and man's room. The stable contains box stalls with ornamental iron fittings. The upper part of the building is supplied with the modern fixtures for the storage of feed and hay. The ground

floor contains ample stalls for the cattle, and storage space for farm implements and other necessary farming apparatus.

Just a short distance from the barn, and standing under a great spreading oak, is the dairy and spring house, located at the side of the lake which is embraced in the estate. The old dairy is built of stone, and it was given a clean up with a coat of whitewash, inside and out, and a new roof.

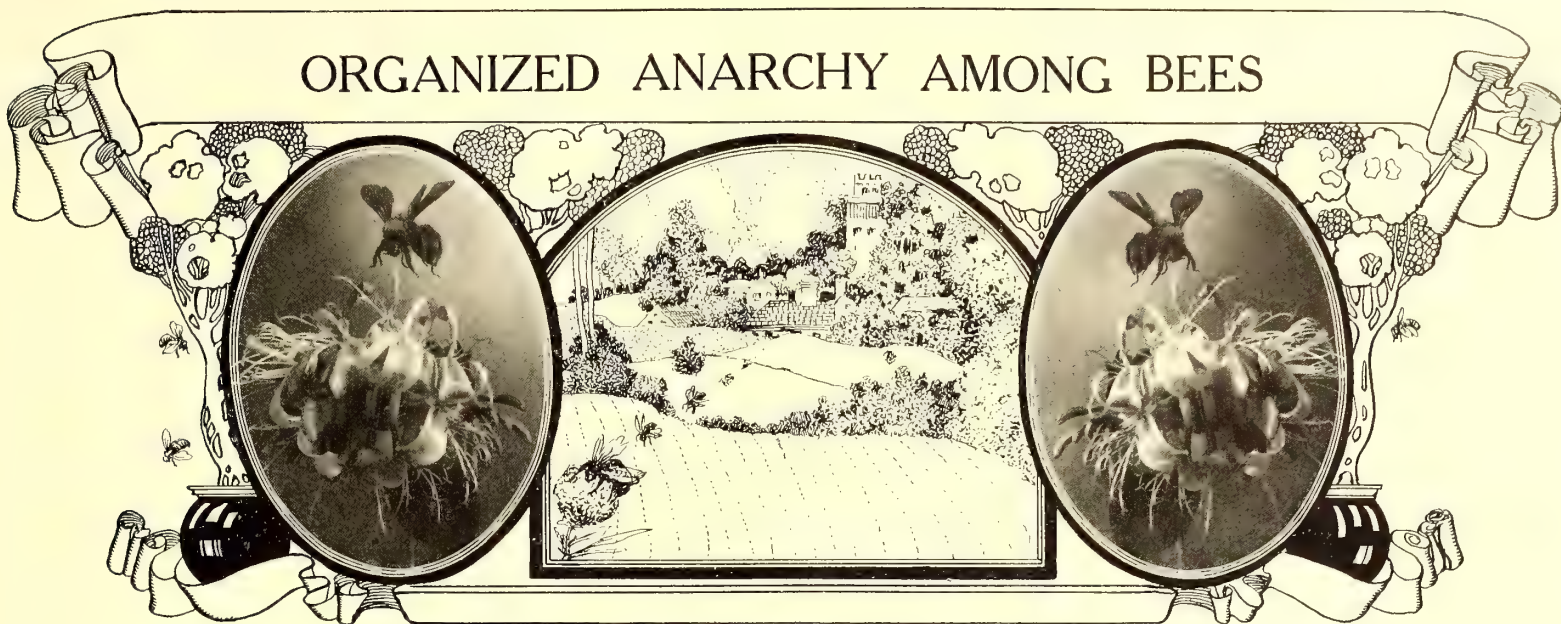


Fine Old Prints Adorn the Walls of the Dining-room While a Fireplace with Colonial Mantel Adds Extra Charm to It



A Quaint Old Four Poster and Bureau of Old Style Are Quite in Harmony with This Old House

ORGANIZED ANARCHY AMONG BEES



By Gaston Bonnier



BEES and their monarchy have often been contrasted with republics. It is now known, however, that the social system of the bees is not monarchy, but socialism—or, rather, anarchy, for there is no evidence of the existence of an administrative or legislative body, commanders or a hierarchy of any kind. If we must distinguish between the social systems of bees and those of ants, in both of which feminism has been carried to the highest development, we may say that ants are individualists and bees are collectivists.

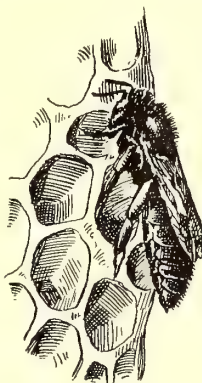
The queen bee (Figs. 2, 4, and 6, M) is not only absolutely devoid of authority but she is a mere slave devoted to a single task, the laying of eggs, in which she is guided and controlled by a sort of staff, the members of which are continually changing. The queen is the issue of a normal egg similar to those which produce workers but, instead of being functionally neuter, like these, she is developed into a perfect female by the administration of a special food. The fecundity of the whole colony is thus concentrated in a single individual, and the poor queen, the universal mother, is compelled to lay continually, the number of eggs laid each day being nearly proportional to the quantity of honey collected on that day. At certain seasons of the year she deposits daily 3,000 eggs in as many cells, which are arranged in double layers, back to back, forming the "combs."

This mother of her people has gone

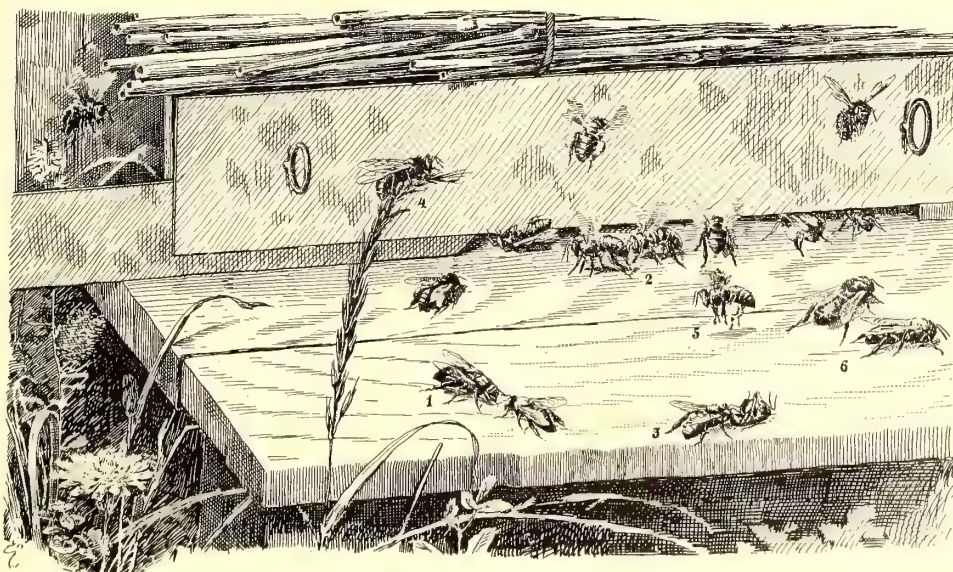
outside of the hive only once, soon after her emergence from the cocoon, and she will not go out again unless she goes to lead a swarm. With these exceptions she is a perpetual prisoner, tended and pampered by her train of workers, but only on condition that she never fails to lay in the cells as they are pointed out to her in perfectly definite order. If her production of eggs becomes insufficient, for any reason, the workers prepare a new queen to take her place. The condemned queen herself lays, in a special cell, much larger than the rest and of very different shape (Fig. 3, left), the egg which is to produce her successor, the larva which issues from this egg and occupies the royal cell being fed with the special food known as "royal jelly." As soon as the new queen has emerged from the pupa and become pregnant, the old queen, hitherto tended with the most scrupulous care, is ruthlessly sacrificed. Thus is effected what agriculturists call the natural renewal of the queen.

The sole privilege enjoyed by the queen is that of living (provided that she continues to lay regularly) longer than her sisters or her children. Her life may extend through four or five years. The summer workers live only six or eight weeks, while the winter workers, which have very little to do, may live four or five months.

Nor can a trace of authority or initiative be discovered in the male bees or drones (Fig. 1, 6 and Fig. 5, B). Their number, which varies greatly during the season, never exceeds a few thousands, while that of the workers of the hive may be more



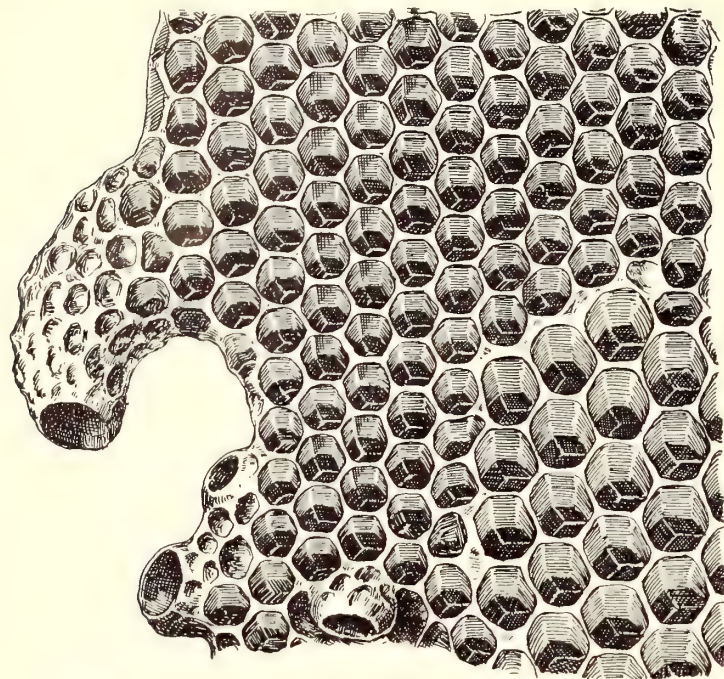
2—Queen on comb



1—Bees Observed at the Entrance of a Hive. 1, a guard; 2, ventilators; 3, a scavenger; 4, a harvester resting before entering the hive; 5, a harvester laden with pollen; 6, drones

than a hundred thousand. The drones are usually regarded as mere idlers, forming a sort of inverted harem of no possible use except in the event of a change of queens. But although the drones are unable to collect honey and appar-

cells, in which the larvæ can grow to the proper size (Fig. 3, lower right corner). When the execution has been decided on, the workers permit the males to go out of the hive but prevent their return and an unequal struggle, curious to witness, takes place at the entrance of the hive. As the drones have no stings they are inevitably defeated. Some abandon the siege and go away to perish miserably, while others continue the combat until they are driven away, sometimes pierced through and through by the stings of the workers. Small and compact groups of drones, however, are often seen to force their way through the workers while these are occupied with other drones and to gain entrance into the hive, whence it is difficult to expel them. If they attempt to climb up the combs to the honey cells above, however, they are promptly thrown down and the massacre continues inside the hive. Sometimes all the intruders are soon killed and their corpses are dragged out of the hive, but if the drones are very numerous the workers may simply keep them prisoners in a corner of the hive until they die of starvation.



3—Brood Cells of Various Kinds. Above worker cells. In the right lower corner, drone cells. At the left, a finished queen cell. In the left lower corner, unfinished queen cells

ently leave the hive only to get a breath of fresh air, flying about without alighting on flowers, they fill subordinate roles at the height of the honey-gathering season, when on fine days every worker that can be spared from the hive goes out to assist in the harvest. At such times a few of the workers compel the drones to remain in the hive where their presence maintains the temperature required for the development of the young brood. In this case the drones replace the workers which ordinarily act as brooders.



4—A Queen, laying an egg in each brood cell

But, in July and August, when the principal honey season is over and there is no further possibility of a change of queens, either in connection with swarming or because of an insufficient supply of eggs, the male bees have become useless, and as these voracious idlers consume a great deal of honey it would be out of the question to feed them

through the winter. Therefore, at the end of the summer or even as soon as the daily harvest has considerably diminished, they are condemned to death by the whole body of workers. There will be time enough next spring to compel the queen to lay drone eggs in cells, larger than worker

Now, when we recall that the workers control the queen's laying and replace her when she fails to lay satisfactorily, and that, at a definite season of the year, they decide to expel the males, we see that of the three kinds of bees in the hive, the queen, the males and the workers (Figs. 5, 6 and 7) the last form the ruling class.

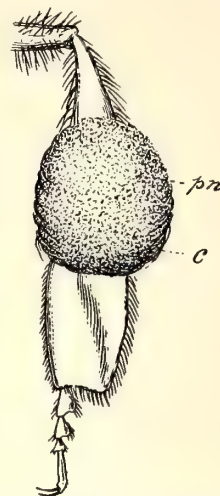
A question now suggests itself. Are there several varieties of workers or, at any given instant, are certain of the workers in command of the colony?

It is known that the various duties, within and without the hive, are distributed among the workers, and names have been given to different bodies of workers in accordance with the tasks which they are seen performing. Since Huber's investigations, however, it has been admitted that the same worker may successively perform all of these tasks and certain experiments, made by myself and others, which I shall mention presently, prove this general law. But are the differences observed among workers due solely to their respective ages, as most bee-keepers believe?

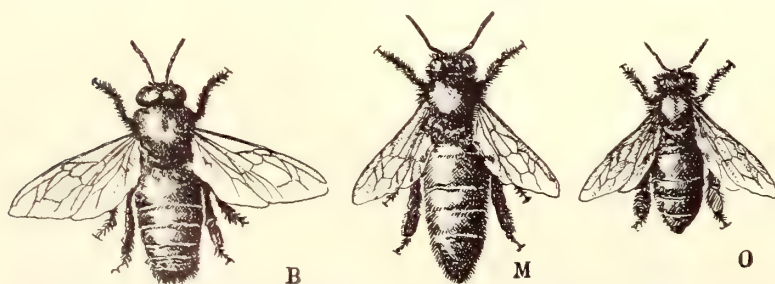
Before answering this question let us classify the principal duties of the bees, both within and without the hive. Merely by watching the entrance of a hive on a fine day in spring we can easily observe that different workers are engaged at very different tasks. In this way we distinguish in a general way the following varieties:

1. The guards (Fig. 1, 1) which defend the hive from its enemies—wasps, hornets, death's head moths, robber bees from other hives, etc. The guards walk to and fro before the entrance and they appear to be able to summon assistance from workers inside the hive, near the entrance.

2. The ventilators (Fig. 1, 2). These stand with erect legs, often in files which are prolonged within the hive, and



8—Hind foot of worker with a pellet of pollen (pn), held in its concavity by bristles (c). (Magnified)



5, 6 and 7—The three kinds of bees found in each hive. (Magnified). B, male, or drone. M, queen bee. O, workers



9—Bees gathering propolis from poplar buds

keep their wings in continual movement in order to ventilate the hive and remove the water vapor due to the evaporation of the freshly gathered honey.

3. The scavengers (Fig. 1, 3). These are most conspicuous early in the morning when they are seen carrying out of the hive all waste matter and debris, the bodies of bees that have died during the night (the daily mortality may be from 500 to 1200), badly formed larvæ, etc. The scavengers also kill or expel the ill or wounded workers deemed incapable of further service to the community.

4. The harvesters (Fig. 1, 4 and 5, and Fig. 12). Large numbers of these are observed emerging from the hive, flying swiftly and directly toward their destinations, returning laden with honey and other things, and alighting heavily on the platform of the hive before entering. There is a further division of labor among these harvesters, for the different materials collected for the use of the colony are never brought in together by the same bee.

Most of the harvesters return laden with nectar, which is stored in the crop, or expansion of the alimentary canal. Others bring in pollen which they have gathered from the stamens of flowers (Fig. 1, 5), and packed, in two little

not more than 25 per cent. of water, adding an antiseptic to prevent fermentation, cover the filled cells with wax, etc.

A classical experiment by Doenhof proves clearly that the same bee can discharge successively all the duties which have been enumerated and that, in general, the younger bees act as guards, ventilators and wax-workers, and the older bees as harvesters and explorers. In regard to the nurses and brooders, Doenhof's observations are not free from uncertainty.

The experiment was made by replacing the queen of a hive of common black bees with a laying Italian queen. The Italian or ligular bees are easily recognized, even at a considerable distance, by the yellow color of the first three segments of the abdomen. The new queen at once began to lay eggs of the Italian bee in a hive that contained only common black bees. Three weeks after her introduction the first yellow bees emerged from their cocoons. By following the development of the new population it was learned that all Italian bees, during the first fortnight of their adult life, were assigned to various occupations within the hive and at its entrance, but did not go to the harvest field, so that in the two weeks following the appearance of the first yellow bees not one such bee was seen gathering nectar or pollen.

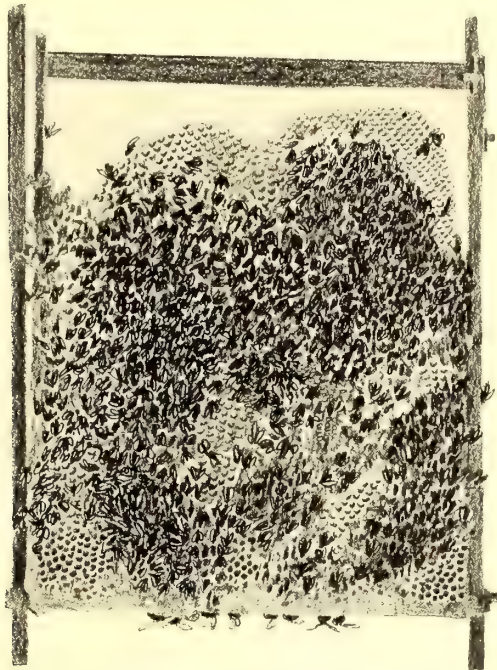
M. de Layens and I repeated this experiment with the same result, but we also discovered a very remarkable fact while we were closely watching a hive, which contained no Italian bees more than two weeks old, on a sunny day when the bees were engaged in the exercise which bee-keepers call the "pin-wheel." In this curious performance numerous workers fly in smaller or larger circles about the entrance of the hive toward which their heads are always turned. The observation was made about ten days after the preparation of the first Italian bees. None of them had yet gone out to gather honey but the pin-wheel was found to consist almost entirely of them, though it also contained a few black bees, which, being the offspring of the deposed queen, were necessarily older than the Italians. When the pin-wheel broke up several of these black bees, after resting for a moment on the platform, flew straight to the harvest field, but all the younger yellow bees re-entered the hive.

This observation shows that the pin-wheel is an exercise in which the young workers, before they are old enough or strong enough to go out to gather honey, learn to recognize the entrance of the hive and its surroundings. It appears to prove also that the exercise is performed under the direction of older workers, familiar with the entrance of the hive, which return to their task of harvesting as soon as the exercise is finished.

A few days later we saw a few Italian bees beginning work as harvesters. Following them from flower to flower we observed that they alighted with hesitation and often walked around a corolla without extracting nectar. They did not collect nectar in the normal manner un-



11—Old workers, recognizable by their ragged wings



10—A comb of brood cells, covered with bees acting as brooders

colored pellets, in the spoon-shaped hollows of their hind feet (Fig. 8). Still others, especially when nectar is scarce, fill their crops with water which is used to mix with honey and pollen to form the paste on which the larvæ are fed. A few of the harvesters, again, pack their hollow feet, not with pollen, but with a wax-like and adhesive substance obtained from the buds of the fir and the poplar (Fig. 9). This is the raw material of the "propolis," with which the combs of wax are attached to their supports. Finally, if the bees that leave the hive early in the morning are observed with care, it will be discovered that some of them, instead of going directly to definite objective points, fly about irregularly, making a peculiar sound with their wings. These are the explorers which examine all plants and other objects in search of substances worth gathering.

In the interior of the hive the duties of the bees are even more diversified. We may distinguish: the wax workers which, clinging to each other in regular clusters, knead the wax secreted between the segments of their abdomens and construct cells of various types; the nurses, which assemble on the combs over the cells which contain cocoons and thus maintain the temperature required for pupation (Fig. 10); and the store keepers, which fill cells with honey containing



12—A harvester visiting a blossom of Viper's Bugloss (*Echium*). (Magnified)



13—About four thousand bees are clustered on both sides of the frame. The queen is hidden by the guards and attendants who are massed around her for protection

til two weeks after preparation. From all this we may conclude that young bees are not able to go out and become expert harvesters at the first attempt. They have to learn to gather honey as they previously learned to perform various duties in the interior of the hive.

In regard to the nurses which feed the larvæ and the brooders which keep the brood warm, assist the young bees to escape from their cocoons, brush them, clean them and unfold their wings, bee-keepers are not agreed concerning the relation which exists between the performance of these functions and the age of the bee. As a matter of fact, there is no such relation. If the brood is very numerous bees of all ages may act as nurses and brooders, and we have seen that even the drones are pressed into service as brooders in the busiest harvest season. In experiments similar to those described above I have observed that during the first week after the appearance of the Italian bees, before one of them had left the hive even for the pin-wheel exercise, a great many of these young Italians acted as brooders, with the assistance of very old black workers, whose age was indicated by their ragged wings (Fig. 11).

It appears, then, that the comparatively easy duties of the brooder and the nurse are discharged, as a rule, by newly born workers too young to act as harvesters and by old, worn-out workers, which have ceased to be useful except as sources of heat.

All the preceding remarks relate to the regular work of the colony. But what will happen if an unusual and unforeseen event transpires within the hive or outside of it?

I have often repeated the following experiment:

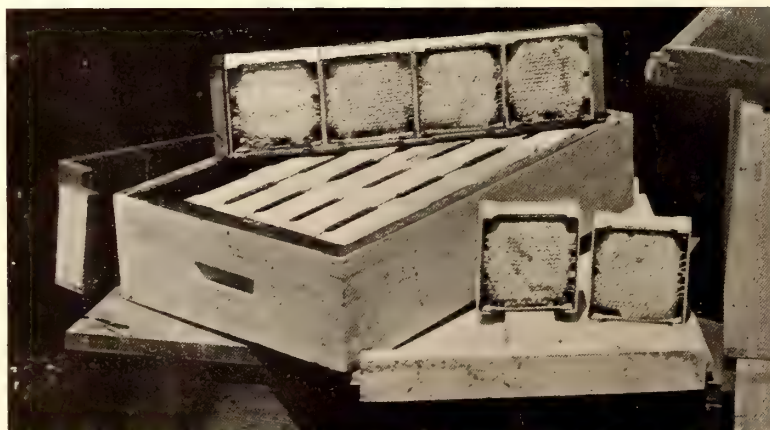
Frames filled with pieces of perfect comb, fastened with twine, are placed in a hive. Now, the bees have never seen twine in the hive, where its presence appears to them intolerable, so, after partly destroying and reconstructing the pieces of comb thus secured, and fastening their edges with propolis, they gnaw the twine with their feeble mandibles. When a piece of twine is gnawed off and falls to the floor of the hive, the workers drag it outside and place it parallel with the edge of the alighting board. Then five or six workers arrange themselves at nearly equal distances along the cord, seize it with their mouths and fly away with it to a safe distance from the hive, where they let go simultaneously and drop the cord to the ground. In this operation it is impossible to detect anything like a command or to distinguish any "forewoman" in the little band of workers.

In conclusion I will describe an experiment which I made last year relative to the communication of information by one worker to another. I placed a drop of honey on the mouth of a nectar-bearing flower much frequented by bees and from it laid a train of honey to a much larger drop some distance away. The bees which came successively to the flower in search of nectar at first paid no attention to the honey, for bees are not easily turned aside from the particular task in which they are engaged. An hour and a half elapsed before one of the harvesters perceived the honey and discovered the large drop. Beside this she remained, drawing honey, for more than three minutes, during which I marked her abdomen with colored talcum powder. She went to the hive and in six minutes returned directly to the site of the drop, which I had renewed during her absence. After she had made several such journeys I saw the same marked bee return, accompanied by two recruits. I marked these also and de-

posited several drops of honey around the spot. The number of recruits increased. In three-quarters of an hour I had marked fifteen bees which continued to bring others to the



14—Removing bees from the hive



15—Honey ready for the market



16—The Bee Farm Is a Place of Endless Activity and Great Interest

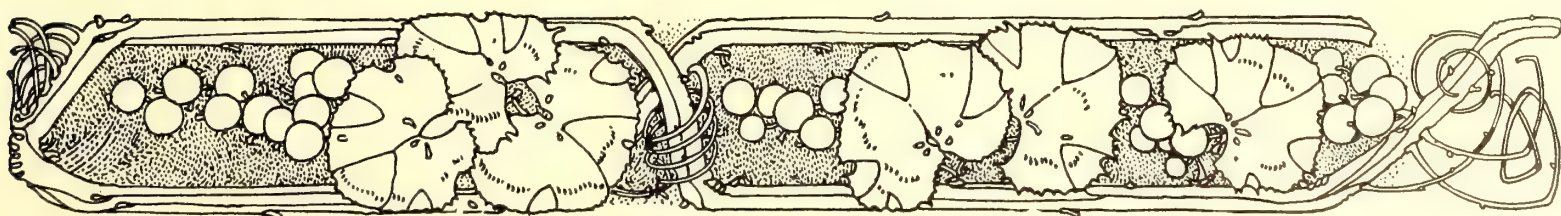
spot, for I constantly replenished the store of honey. All these bees were from the same hive, in which some signal must have been given, for suddenly thousands of bees issued from the hive and darted toward the scene of the experiment. Finding the honey exhausted, they flew about in all directions, making with their wings the peculiar sound that indicates anger, and I barely succeeded in escaping their stings.

This final result was lacking when the experiment was repeated with syrup instead of honey. What, then, had occurred in the case where honey was used? Evidently this: The workers in the hive, seeing honey brought in for a considerable length of time, must have reflected that, in the course of nature, honey is found only in bee hives. Hence there must be a hive to rob. Therefore war must be declared and a large force must be sent promptly to destroy the weak hive and capture its store. So the bees rushed

en masse to the scene of pillage, guided by the marked bees which alone knew the way, and which I saw arrive in advance of the rest. Finding neither hive nor honey, the disappointed marauders, ready for combat, gave way to excitement. Half an hour later order was completely restored.

This experiment, which is susceptible of various modifications, shows clearly that the workers have some means of communicating information and of directing each other to places where useful substances are to be found. It proves, also, that the united workers of a hive are able to make a sudden decision and act as a body when circumstances demand such action.

It appears, therefore, that the power to direct the daily work and to form resolutions in unforeseen circumstances resides in the entire community. There is universal participation in government, a marvelous organization of anarchy.



The Residence of William J. Serrill, Esq., Haverford, Pa.

By Abel Welch

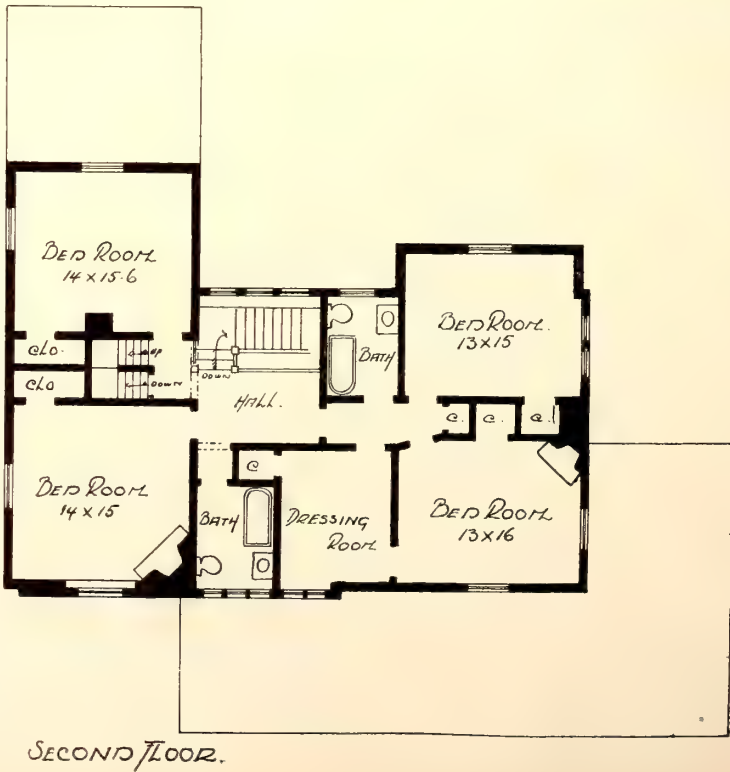
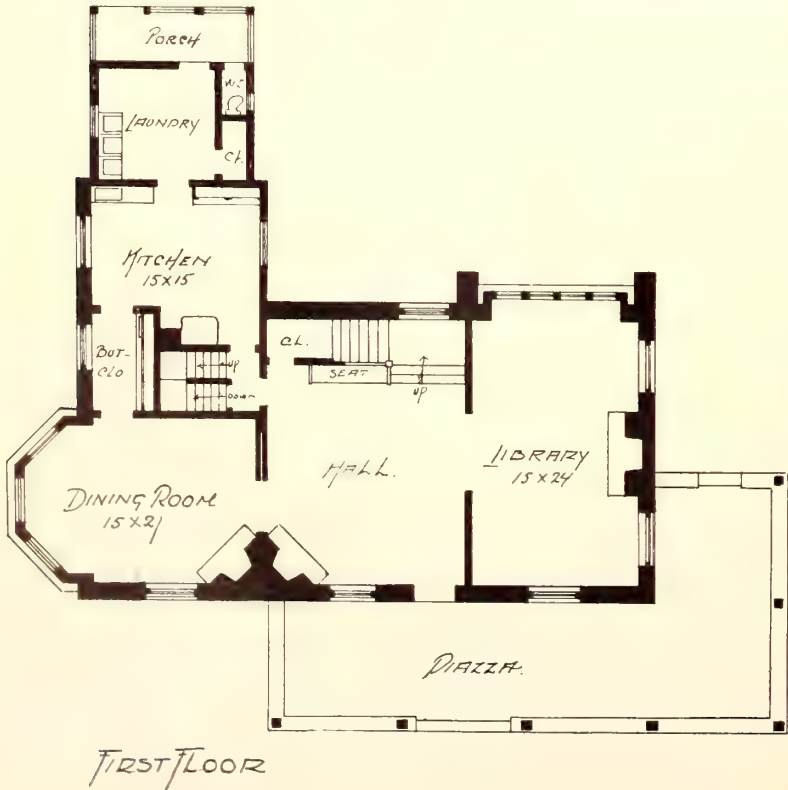


HE house built for William J. Serrill, Esq., at Haverford, Pa., is designed and built in the English style of stone and half timber. A winding driveway leads from the road to the piazza. The balustrade and the first story are built of rock-faced stone, of gray color, laid with broad white mortar joints. The second and third stories are beamed, forming panels, which are filled in with stucco, of a soft gray color, while

the beams are painted a bottle green. The building is crowned with a roof covered with shingles and left to weather finish. The chimneys are low and squatty, and are built of brick and finished with stone caps. The plan of the interior is excellent, and shows a large central hall extending through the house, with a library at one side, and a dining-room on the other, while the kitchen and its dependencies are placed in the extension which is at the rear.



A Half Timber House in the English Style





The Library Walls Have Tapestry Below with Pale Yellow Above

The hall, almost square in form, is trimmed with English oak finished in a dark brown. Its principal feature is the staircase, with its ornamental balustrade, its broad landing lighted by well chosen stained glass windows, and the seat which is placed beside the first flight of steps. In the corner of the hall is a fireplace which is built of brick with facings and a hearth of similar brick, and a mantel of good design.

The library is treated in a comfortable manner. It occupies the entire depth of the house with exposures on three sides. It is trimmed with oak. The walls are covered with a red and green tapestry to the height of six feet, at which point is a plate rack. Above they are covered with a pale yellow tone which is carried over the ceiling. The fireplace, which occupies the center of the wall space at one side of the room, has facings and hearth of Dutch tile and a "Craftsman" mantel. At one end of the room is a paneled seat built-in, over which is a cluster of casement windows.

The dining-room, which is built with a bay window thrown out on one side, is attractive with its mahogany trim and its old mahogany furniture. The walls are treated with a yellow and green combination finished with a plate rack. In one corner of the room is a fireplace with facings and hearth of Dutch tile, and a mantel and paneled overmantel in good style, while

in the opposite corner is a china cabinet of quaint design.

The butler's pantry separates the dining-room from the kitchen and is fitted up complete. The kitchen and laundry are trimmed with yellow pine, and each is fitted with all the best modern conveniences.

The second floor contains four bedrooms, dressing-room and two bath rooms. The hall and two bedrooms are trimmed with chestnut finished in its natural state; the remaining two bedrooms and dressing-room are trimmed with poplar, and painted white. The bath rooms have tiled floors and wainscotings and are furnished with porcelain fixtures and exposed nickel-plated plumbing.

There are two servants' bedrooms, one guest room, trunk room, and a bath room on the third floor, all of

which are trimmed with yellow pine treated natural. The cellar contains the heating apparatus, fuel rooms, and storage. The house was designed by Messrs. McIlvaine and Roberts, architects, Philadelphia, Pa., who make a specialty of this class of house.

The grounds surrounding the house have been well planted, and the corners of the house and along the piazza wall have received a similar treatment. The ground adjoining has been transformed into a beautiful garden.



The Dining-room Is Finished with Mahogany Trim and Has Old Mahogany Furniture



THE IRIS GARDEN

By Ida D. Bennett



THE humblest blue or yellow flag which grows beside a bit of sedgy marsh has a beauty of its own, a beauty not alone of color, but largely made up of form and poise, the pure line of artistic proportion so grateful to the artistic sense. This beauty of form and line is greatly emphasized in the iris family—the aristocratic cousins of the humble flag.

So large a family is the iris in all its ramifications that one may search through all the temperate zones and find few, if any, portions whose flora is not enriched with one or more forms of this beautiful flower.

Probably the best known and admired are the various Japanese and German iris. These differ materially in the construction of flower, time of blooming, and somewhat in color; it is a question if either can carry off the crown of beauty, each being charming and beautiful in their own way. Fortunately their time of blooming is separate, and by planting the two varieties one may have iris in bloom from early in May until late in July, thus extending the iris season over the greater part of three months.

Two colors of the German iris have been common in our gardens for too many years to need description unless, indeed, they have so nearly disappeared from the modern garden,



The Iris Border Is the Most Effective Manner of Iris Planting

and so need introducing to the newer generation. These are the old fashioned mauve with light standards and deeper falls—a stately and beautiful plant when well grown and blooming early in May, and the cream-colored variety which blooms later in the month. Less seldom seen in the old fashioned garden was the white iris, a pure and beautiful flower, and equally vigorous and free blooming. These three are of iron clad constitution and are especially adapted for naturalizing along the banks of streams, the edge of wooded slopes, and other points of vantage in the semi-wild garden.

Among the rarer German iris is a beautiful white, the standards and falls edged with a feathered band of blue, this is really about the loveliest of the several varieties.

Mexicana, a variety with purple standards and yellow falls, is rich and unique in color, then there are various bronze and



Too Much Shade Should Be Avoided for Successful Planting

preference it is for leaf mold and sharp sand, a preference it shares in common with its congener the Japanese iris.

It requires less water to bloom well than the Japanese variety, but should be well supplied during the budding and blooming period.

While it may be successfully grown in partial shade too much shade is to be avoided; a position where it will receive the morning sun will prove as successful as any, and where it may have some protection from bleak winds in winter. It should not be planted where the water can stand about its roots in winter, but be given a well drained position.

The iris is always more effective when grown in long rows and for best effect should never be mixed with other flowers.

When naturalized among shrubbery or along the course of streams—whether natural or artificial—and in such positions it is always at its best, it should be distributed in groups or large clumps rather widely separated.

In planting the iris the roots should be merely covered with soil as this is one of the plants which love to have their roots close to the surface, for this reason a mulch of lawn clippings over the surface of the bed during summer is beneficial, and in the fall the ground between the roots may be covered with old manure, but it should not be allowed to cover the crown of the plants as it is apt to induce decay.



The Iris Close at Hand

yellow, blue and pink, light and dark blue, and rosy lilac varieties that are striking and beautiful, a description of which belongs properly to the florist's catalogue, and any of which are a real acquisition to the hardy garden.

Any good garden soil seems to suit the German iris, perhaps if it has a



The Splendid Flowers Beautify Any Landscape

The iris should be lifted every three or four years and divided and all dead wood removed from the roots, or rather the live portion of the root, leaving an eye to each portion, should be removed for replanting and the remainder consigned to the compost heap. The iris blooms but once from the same crown, the plant after blooming forming another crown for next year's bloom, the old dying away; in this way in the course of two or three years the iris accumulates a mass of dead growth, which is detrimental to the plant and should be removed.

In planting the iris the crowns should be set a foot apart each way, if more than one row is set parallel; this allows of free development, and is the only way in which the plants may be successfully grown. Planted closely together they will give good enough results for a year or possibly two, but soon become congested and dwarfed.

The Japanese iris require practically the same treatment as the German—rich soil, abundance of water, especially at blooming time, and room to develop freely. They can scarcely have too much water during the hot weather. I have seen them planted beside a hydrant where there was a continuous trickle of water about their roots, and they bloomed magnificently.

The blooms of the Japanese iris are

While the German iris seldom or never self sows, the Japanese occasionally do so, and one finds little seedlings coming up here and there in beds and paths; these should be carefully transplanted and cared for as they may develop some quite desirable variety as it is in this way that new varieties are produced.

The Spanish iris are seldom hardy in the North, but when they do succeed in surviving our rough winters, their dainty flowers are very acceptable in early spring. They show a golden yellow in most strains—a color rare in iris. They are too fragile and small to be effective unless planted in large



The Mixed Borders and Iris



The Charming Grouping of Iris and Hedge

among the floral wonders, so immense are they in size and beautiful in color, all the shades of mauve and purple and lavender are shown with many crimson and pink varieties.

The double white may be given the crown of beauty, however, rivaling, as it does, the stateliest lily. Second in point of excellence is a lavender closely speckled with mauve; this is especially notable for size and freedom of bloom, being much the surest bloomer of all. Various fantastic names are given the Japanese iris, but they are by no means descriptive, nor do they serve to identify any particular plant owing to the fact that each dealer in the plants has a name of his own under which he catalogues them. For this reason no attempt to describe the various varieties by name is attempted.

quantities, and need a background to bring out the good points.

Iris Susiana is an extremely beautiful iris, but is not hardy in the North without much protection, and this is the case with many iris, which but for this would be great acquisitions to our hardy garden.

In planting Iris, as in planting all flowers, it is necessary to consider the result that is particularly desired, before anything is done. The plants may be placed in rows; a whole field may be crowded with them; a great bed is often highly effective; and single plants spaced regularly in a long bed often yield immensely decorative effects. It is thus a

plant that readily yields itself to a considerable variety in planting and is available for almost every condition that may arise in the usual or the unusual garden.

While this is not a quality peculiar to the Iris, it is a quality so excellent in itself, and so very agreeably realized in this plant, that this aspect of its availability deserves more than a passing notice. Many plants are useful in a decorative sense only under single conditions of growth; the Iris, however, is one of the most adaptable of plants, and is as thoroughly useful as it is immensely decorative.

And its decorative quality, its superb bloom, its comparative ease of culture, its own natural beauty, have endeared it to flower lovers of many lands.

The Longfellow Mansion at Portland, Maine

By Mary Caroline Crawford



NE of the most interesting examples in New England of the old Colonial style of architecture is that supplied by the Longfellow mansion at Portland, Me. It is for this reason, scarcely less than because the house is associated with the boyhood days of America's best beloved poet, that six thousand visitors have in a single summer made a pilgrimage to the place; on the whole a fine record and brilliant testimony to the poet's popularity.

the austere White Mountains standing grandly out against the sky at the western horizon.

In its original form the house was of two stories with a pitch roof. Possibly it was then more picturesque than now, but in 1815 a third story was added for the sake of extra room. A slight difference in the color of the bricks outlines, even to-day, the line of this "improvement." Inside, fortunately, the original appearance of the rooms has been carefully preserved. All the windows have fine paneled wooden shutters, and some of those at the back of the house



The Old Wadsworth-Longfellow House

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For our present purpose, however, the house is the thing,—that house whose atmosphere of old-time hospitality is felt by every person who sets foot inside the front door and faces the broad stairway of the deep hall. This hall runs through the center of the building and, in the old days, commanded at the lower end a delightful garden. Though it is now in the heart of a busy city the house when built was on the outskirts of the town. All about then were rolling green fields, with the ocean dimly discernible in one direction and

even retain the old casements with their many panes of glass. The doors, too, keep the "box latches" of yore and in all the rooms on the ground floor there are very wide window-seats—thanks to the exceeding thickness of the original walls.

This last named item in the house's construction occasioned considerable vexation to General Peleg Wadsworth when he was building his mansion away back in 1785. Portland had never before erected a brick house and no bricks suitable for the purpose were to be had nearer than Philadel-



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The Old Parlor

phia. The general therefore ordered from the Quaker city what he supposed would be enough bricks for his purpose, but the builders, miscalculating the thickness of the walls—they are sixteen inches through—the bricks gave out and it was a good six months before operations could proceed.

The man who could afford such a house as this one, at a time when building materials brought such prices as they did immediately after the Revolutionary War, must needs have been a person of prominence and property. So, indeed, we find General Wadsworth to have been. Graduated from Harvard in 1769 he was among the first to organize a company to resist the tyranny of the mother country. In the fortification of Roxbury and Dorchester Heights he rendered valuable service, and in 1778 he was appointed adjutant-general of Massachusetts. A year or two later he was placed in command of the troops on the Maine coast.

All this time, however, the doughty soldier was a citizen of Plymouth, Mass. It was not until 1784 that he proceeded from the Pilgrims' country to Portland, bringing with him his wife (who had been Miss Elizabeth Bartlett, of Plymouth), a lady of fine manners and all womanly virtues, "who was alike his friend and comforter in hours of trial and the grace and ornament of his house in the days of prosperity."

The associations of this house have been almost all those of prosperity. I have a shrewd suspicion that this is one reason the place is so popular. One likes to trace in imagination the many pleasant happenings with which the old furniture and the curious kitchen things have been intimately connected, and to recall that the piano, which is still in the parlor at the left of the entrance hall, was the first ever brought to Portland, and elicited so much admiring curiosity that the country people were wont to stand around the windows, looking in when music was being played. How

fraught with suggestions of real neighborliness and abundant leisure is the anecdote!

When the Wadsworth family moved into their fine new house there were already six children, Zilpah, the future mother of the poet, being then a maid of seven or eight. That she had something of the literary gift her distinguished son was to possess to such marked degree is shown by this vivid description she wrote of her father as he looked in the early days of their residence under this fine old roof tree:

"Imagine to yourself a man of middle age, well proportioned, with a military air, and who carried himself so truly that many thought him tall. His dress, a bright scarlet coat, buff smallclothes and vest, full ruffled bosom, ruffles over the hands, white stockings, shoes with silver buckles, white cravat bow in front, hair well powdered and tied behind in a club, so called." To this, one has only to add a cocked hat of black felt to get General Peleg Wadsworth exactly as he looks to-day in the portrait which hangs over the mantel-piece of the sitting-room.

In the stately parlor of this house were married, in 1804, the parents of America's dearest poet. Zilpah Wadsworth had now grown to be a beautiful and gracious maiden whom Stephen Longfellow, a young Harvard graduate just beginning the practice of law, accounted himself very fortunate to win for his bride. The Longfellow had for two or three generations lived in Gorham, Me., where father and son were in turn lawyers of prominence and where their old home still stands. The poet's father grew up on this Gorham farm.

In 1808, the year after the birth of the poet, the newly wed Longfellow definitely took possession of Wadsworth House. General Peleg had the year preceding built another noble mansion for himself—Wadsworth Hall—at Hiram, Me., and had there removed to spend the remainder of his days. The Portland house thus came naturally enough to



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The Guest Room

be the home of his favorite daughter and of his lawyer son-in-law. Here, therefore, where their life together had begun, Mr. and Mrs. Stephen Longfellow spent many happy years. Here the poet's six brothers and sister were born. And here Anne Longfellow (Mrs. George Pierce) passed almost her entire life, leaving the house, upon her death in 1901, to the Maine Historical Society as a memorial to her gifted brother.

No more fitting monument could well be imagined. For it is within these hallowed walls that all the home thoughts and reminiscences of him who is pre-eminently America's Poet of Home are bound up. Moreover, it was from this very house that the gifted boy stole out at the age of thirteen to drop into the box outside the office of the Portland Gazette his first published verses, "The Battle of Lovell's Pond." Other poems known to have been written wholly or in part in this house, are "Musings," "The Spirit of Poetry," "Burial of the Minnisink," "Where from the Eyes of Day," "Song of the Birds," "Changed," "The Lighthouse," and "The Rainy Day." As one sits at the desk made famous by the writing of this last named poem one may still see, glancing out into the garden, the vista that met the poet's eye. This room is now called the "Den" or "Henry's Room," but it was originally the sleeping apartment of General Wadsworth. The walls are decorated with paper brought from Paris sixty years ago.

Scarcely less interesting than the parlor with its old-time piano and the den with its ink-stained mahogany desk is the family sitting-room, which was once the law office of the poet's father. Here are dozens of pieces of furniture which fill the collector with envy. But the charm of it all lies in the fact that the chairs and tables, the andirons and the pictures have associations as well as age. The carpet is the same as was upon the floor at the time of the poet's last visit to his old home, and it was against this mantel that he often leaned as a youth.

The poet's chair still stands by his favorite windows; near it is a sewing table that was his mother's, and, on the other side, the chair his father liked best. On the adjacent wall hangs a gilt-framed mirror whose quaint picture and row of tiny gilt balls stamps it as of his grandmother Wadsworth's day.

Just across a doorway leads into a small room built on by Stephen Longfellow for his law office but now sacred to shelves and cupboards. There is here a single window commanding the old garden and that was once a favorite writing place for the boy poet we must believe from a letter sent to his sister Elizabeth during his first visit abroad in 1829: "My poetic career is finished. Since I left America I have scarcely put two lines together . . . and no soft poetic ray has irradiated my heart since the Goths and Vandals crossed the Rubicon of the front entry and turned the Sanctum Sanctorum of the 'Little Room' into a china closet."

No part of the house, however, is more interesting to visitors than the kitchen, with its capacious fireplace and its curious outfit of utensils long since retired from use. The fireplace itself is especially worth examining because of the figure of a fish on an iron plate set into the brickwork on the back, a thing of which one of the poet's brothers has spoken

of as "a fish baked in effigy." Here the crane still supports the pots and kettles that hung from the hook a century ago and all about the hearth are articles which in name as well as in use are quite strange to visitors of the twentieth century, a Dutch oven, a tin kitchen, a plate warmer, apple roaster,



The Kitchen of Longfellow's House

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coffee roaster and mills, a bread toaster, and waffle irons which look like a huge pair of tongs. Built into the brickwork at the left is the oven for baking and at the right is a boiler with the small opening underneath in which a fire was made on washing days. The kitchen dresser near-by is likewise attractive with its display of well-shone Britannia tin and earthen ware. Here may be seen the bread tray used by General Lafayette when he visited Portland in 1825. Here, too, are candle molds and lanterns and the steelyards with which the babies of the family were weighed.

Directly over the parlor, in which the mother of the poet was married, is her bedroom in which she died. Near here is the cradle in which the baby Henry was rocked, as well as a priceless collection of old gowns and bonnets, among them the little cap first worn by that head which was later to be crowned with laurel. Here, too—and this is of special interest to visitors—is a copy of a long-forgotten poem in which Henry Longfellow protested against the removal of this old building when some one wished to replace it by a more modern structure.

The room to which the poet came with his bride is the guest chamber across the hall. The tall, four-post bedstead, with its dainty hangings of dimity and its quaint coverlet suggestive of a bygone day, is the same now as then. By its side is a wood bottom rocking chair which belonged to the first mistress of the house. It was probably in this room that the poet slept during frequent visits made to the house after he became famous. He never lost his love for the home of his childhood and he rejoiced greatly that the conflagration of July 4, 1866, which obliterated so many interesting landmarks in Portland, left "the family house unburned!" Though the old mansion has now been open to the public only four years it has been visited by thousands.

Three Inexpensive Houses

By Francois Picard



RESIDENCE built for Messrs. Wendell and Treat at Essex Fells, New Jersey, is shown in Figure 1. The underpinning, first story, and balustrade to the piazza are built of field-stone boulders, laid up at random. The second and third stories are covered with shingles and left to weather finish. The roof is also shingled and stained a moss green.

The hall is trimmed with oak, and contains an ornamental staircase with broad treads and landings; a large stained glass window at the landing sheds a soft and pleasant light over the stairway and hall.

The living-room is treated with white enamel, and has an open fireplace built of Pompeian brick, with hearth and facings of the same material and a mantel of Colonial style. There are book-cases built in on either side of fireplace.

The dining-room is trimmed with oak; it contains a bay window with seat, and an open fireplace of Pompeian brick.

The butler's pantry is fitted with drawers, cupboards, and sink. This pantry, kitchen, servants' hall, and lobby are trimmed with white pine, and treated with hard oil.

The second story is treated with ivory white paint, and contains seven bedrooms and two bath rooms. The latter are fitted with porcelain fixtures and exposed nickel-plated plumbing. Both the bath rooms have tiled wainscoting and paved floors. The third floor has four bedrooms and bath, trunk room, and the servants' quarters and bath. A cemented cellar contains the laundry, furnace, and fuel rooms. Mr. Lawrence Visscher Boyd, of Philadelphia, was the architect.

The Modern Suburban Home of Mr. George S. Scott at Bala

Costing Fifty-Eight Hundred Dollars

The house of Mr. Scott, at Bala,

Pa., as shown in Figure 2, is built in a handsome manner. It has an underpinning and first story, built of local stone laid up and finished with crow-foot pointing. The second story is sheathed and is then covered with good building paper and cypress shingles which are dipped in and brush-coated with a very deep grass green stain. The roof is covered with similar shingles; it is broken with side dormers. A broad piazza extends across the front and returns on the side.

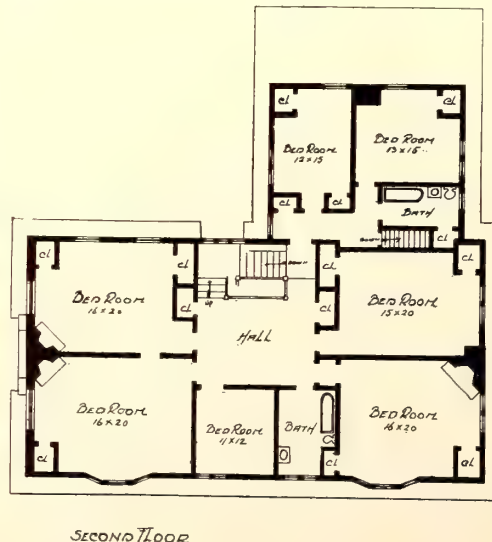
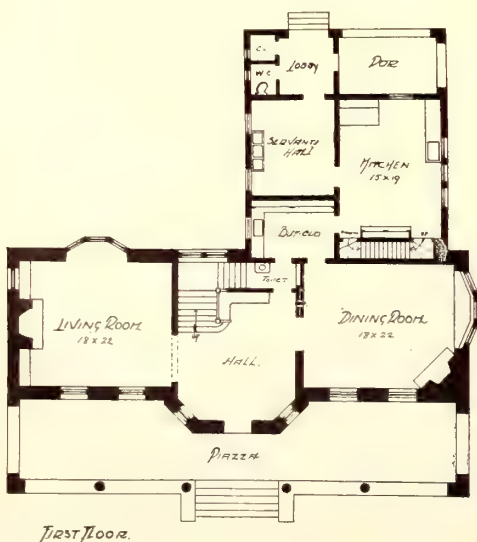
The reception hall, or dining-hall, is unique in its dimensions and treatment. It is trimmed with chestnut, stained and finished with effective brown stains with wax surface. There is an open fireplace in the corner which is built of rough brick for the facing and hearth. Broad arches between the hall and the staircase and the parlor form a very delightful effect. The parlor is also trimmed with chestnut and has an attractive bay window at the front, and a cluster of leaded glass windows opening onto the staircase in the hall.

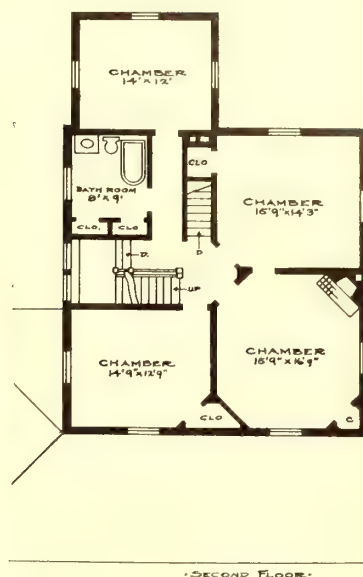
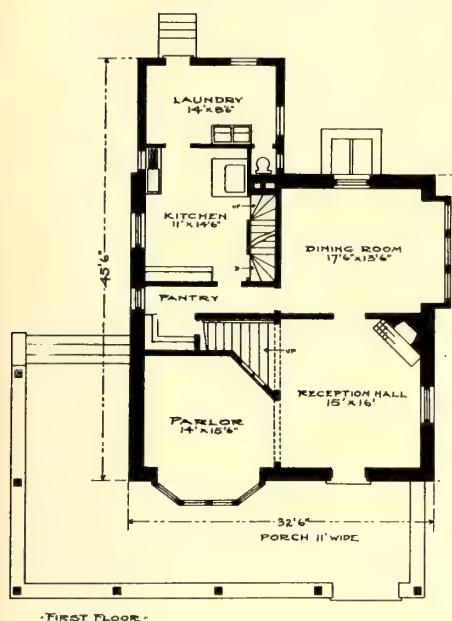
The dining-room is of generous proportions and is conveniently isolated from the kitchen by means of a central hall and pantry. It is trimmed with chestnut and has a plate rack extending around the room. The kitchen and laundry are trimmed with cypress, and each is provided with a generous amount of light and good appointments. The kitchen includes a range, sink and dresser, the laundry with a complete equipment of tubs and servants' toilet. Stairs from the kitchen descend to the cellar, and another flight ascend to the second story.

The second floor is provided with four generous sized rooms, ample closets, and a large bath room. The main bedroom has a tiled fireplace. The bath room is tiled and is furnished with porcelain fixtures and exposed nickel-plated plumbing. This floor and the third floor are trimmed with cypress. The latter contains a billiard room, servants' bed-



1—A First Story of Stone, and a High Roof Containing the Two Upper Stories Gives Opportunity for Picturesque Treatment





2—The Broad Piazza Is Well Nigh Indispensable for the Modern Home

room and bath room. There is also ample storage space here. The floors are of polished oak, excepting in the kitchen, laundry and third floor. The cellar contains a cold storage cellar, a hot water heating system and fuel rooms. Mr. C. E. Schermerhorn, of Philadelphia, Pa., was the architect.

**An Attractive House
Built for
Mr. A. B. Coxe
at Haverford, Pa.**

The unique frame cottage erected for Mr. Coxe, at Haverford, Pa., forms the subject for illustration in Figure 3, and is also from the designs of Mr. Schermerhorn. For those who wish to expend but \$3,000 upon a cottage, one may think, after very careful study of the plans, that to combine utility and beauty at the present day for this sum is simply out of the question, but it will frequently be found that reduction in size largely enhances the aspect of a house from an artistic point of view.

The cottage here-with illustrated is manifestly unique. It has a random rubble work local stone under-pinning. The exterior framework is covered with matched sheathing and then

clapboards which are accurately laid and are painted white. The gable ends are beamed and stuccoed. The roof is covered with shingles stained an Indian red, which, together with the steel gray painted trimmings, green painted shutters, and the dark-red brick chimney creates a flavor of the old fashioned houses of New England, and which lends a resemblance that enlists approval.

The entrance is from a porch, into a small hall from which the stairs ascend and entrance to the library and dining-room is obtained. The library is a pleasant room with an exposure on three sides of the room, and the dining-room is of good dimensions. These three rooms and the entire house is finished throughout with chestnut finished with a wax antique finish. The kitchen is furnished with a large pantry and all the best modern conveniences.

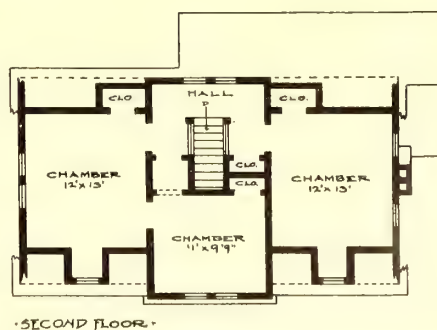
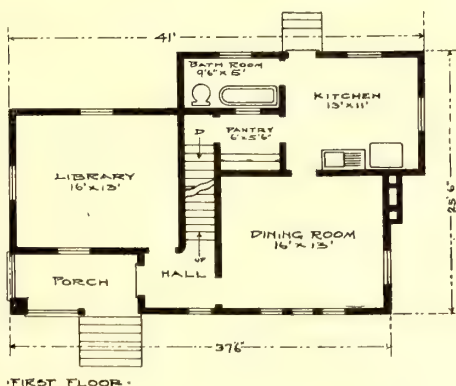
The bath room, which is fitted up in the modern style, is placed off the kitchen.

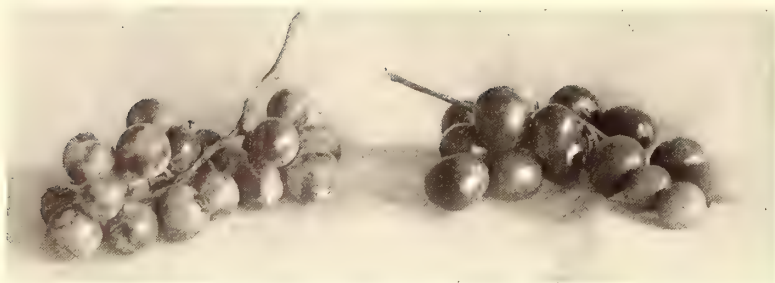
There are three bedrooms on the second floor, each provided with a closet.

The house is supplied with gas and electric lighting, heating by hot air, exposed plumbing and all modern conveniences.



3—A Simple yet Complete Cottage that Cost but \$3,000





Grapes and Burbank Preserving Tomatoes



Seckel Pears and Pear Tomatoes

Tomatoes That Imitate Fruit

By I. M. Angell



HE tomato family possesses the quality of imitation to a remarkable degree. Each one of twelve fancy varieties raised in our garden last season resembled some sort of fruit.

One of the accompanying photographs shows a cluster of Burbank Preserving tomatoes and a bunch of grapes. The size, shape and arrangement on the stem are very similar, but the color of the tomatoes is the ordinary bright red. This sort is spoken of in the cyclopedia as the "cherry-like exquisite-flavored Burbank Preserving tomato." We did not find them particularly attractive in the raw state, but in any case they are worth raising, as a curiosity. The plants are very strong, but smaller than the common tomato and may be set closer.

Another photograph shows a group of small Seckel pears and some pear tomatoes. These average nearly two inches in length and keep very true to the pear shape. There are both yellow and red varieties, the former being the more useful of the two, because of its good flavor and the preserves and confections made from it. Pear tomatoes are very productive, yielding nearly two hundred to the plant. The pear sorts, or in fact any of these small tomatoes, either yellow or red, are very good stewed. Scalding will loosen the skin, which may be easily popped off without peeling.

California cherries and beside them some yellow cherry tomatoes are also illustrated. The resemblance in size and shape is very close. It is easy to imagine a similarity in flavor also, as these small fruited tomatoes have more sweetness than the large ones. The red cherry is larger in size and somewhat like the Burbank Preserving tomato, though better flavored for eating raw. It is also remarkably productive, one plant bearing 270 tomatoes.

The resemblance between a peach and two peach tomatoes is even more noticeable in another variety. The shape is very peach-like, the skin is tender and easily torn, like the

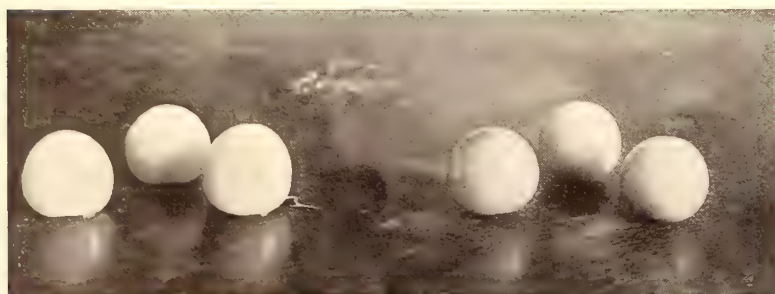
fruit itself, and there is even a downy surface, not unlike peach skin and very unlike the hard shiny skin of the common tomato. The color, too, is suggestive of peaches, being shaded and streaked as if in imitation of the fruit. Yellow peach tomatoes are like the red ones except in color, being so light they do not show any likeness to the fruit itself. Peach tomatoes proved to be the most interesting and useful of all the fancy sorts. For eating from the hand they are excellent, the flavor being sweet and fruit-like. They stand a wet season well and have been found very satisfactory for canning. In the green stage they are one of the best sorts for pickles. They are early, continuous and late bearers.

One illustration shows an apple tomato compared with an apple. This sort is rounder and firmer than most of the tomato tribe and so shows closer resemblance to an apple. The color is so pale a yellow as to be almost white. They are not of much use, being insipid in flavor and only attractive as a curiosity. These are not specially recommended for table use.

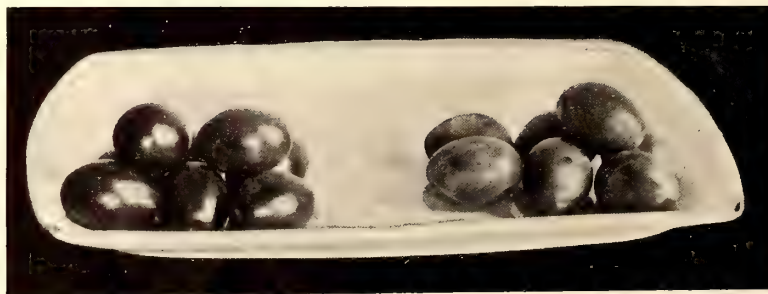
Plum tomatoes and plums are wonderfully alike in size and shape, but differ in color and bloom. There are both red and yellow plum tomatoes, the latter being the most commonly seen of all the fancy sorts. They are well flavored and very productive, over 250 being taken from one plant.

One of the illustrations pictures a dish entirely made up of tomatoes that resemble fruit. The larger ones are peach and apple tomatoes, the medium-sized ones are plum, cherry and pear tomatoes, and the smallest of all are currant tomatoes, a non-edible sort, growing on a "string" like currants and having a bright-red color. When full sized they are only three-eighths of an inch in diameter. On the table beside the dish is a bunch of "grapes."

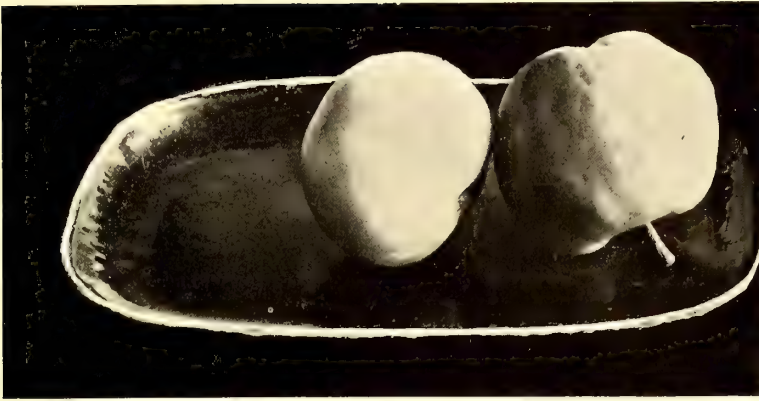
Another sort that makes an attempt at imitating fruit is the strawberry tomato. This does not resemble the original in either shape, size or color, but, when cooked for the table,



White Cherries and Yellow Cherry Tomatoes



Plums and Plum Tomatoes



An Apple Tomato and an Apple

the flavor is much like canned strawberries. This sort is very easy to grow and self sows. The fruit may be stored in its husks and kept till almost mid-winter in a cool dry spot. It is recommended for pies and to dry for use in cakes.

As well as supplying an object of interest in the garden these fruit tomatoes will be found very useful for various sorts of preserves and pickles, recipes for which are seen in numerous cook-books. The yellow pears are scalded, skinned, cooked with sugar and dried. The yellow plums are quite commonly used for preserves, with sugar, lemon and ginger root. Any small fancy tomato in the green state makes attractive pickles, put up whole, first pricking with a pin to prevent bursting, and pickling in vinegar with nasturtium seeds. Any of the yellow sorts make a good marmalade, cooked with sugar and grated pineapple. Tomato honey may also be made from any of the yellow kinds. They are combined with lemon and sugar, cooked, strained, and cooked again till thick. Any sort of fancy tomato makes excellent chopped pickles when used green. Having more skin in proportion they chop more firmly and keep their shape better than the larger sorts which are apt to become mushy.

Some of these curious tomatoes should be grown in every



A Peach and Two Peach Tomatoes

garden. Even a sunny city yard need not despair of a good crop, for tomatoes do not require rich soil, and they may be grown on very little space if trained to a tall trellis, which will have the further advantage of providing a screen. A six-foot trellis will accommodate a tomato plant to each running foot. About a month after setting out the plants, pruning should begin and be kept up till toward the end of the summer, when the most vigorous growth ceases. Two or three lengthwise stems will be enough to leave for each plant, the rest should be cut off, also all growth below the first blossom cluster.

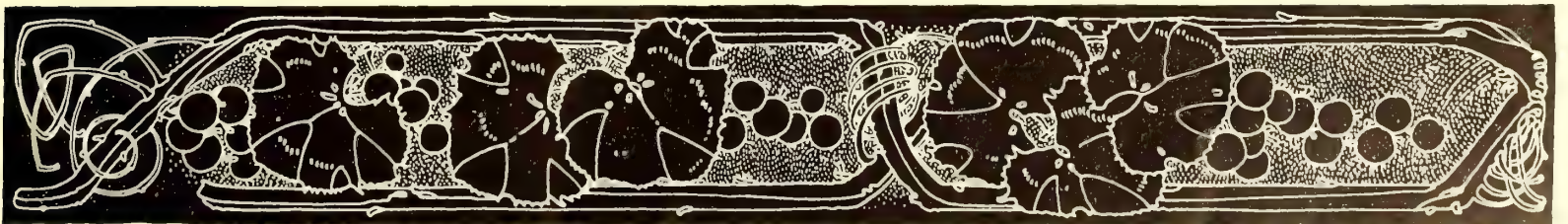
It is not often that plants of the fancy tomatoes can be bought. Any would-be gardener with a sunny window may raise his own. The smallest pinch of seed of each kind will be more than enough. A dozen two or three-inch pots will start the whole collection of odd tomatoes. When two



A Dish of Tomato Fruit

inches high they require more space. Those mentioned in this article were sown from March 29th to April 11th, which gave sufficiently early returns for an ordinary home garden. Seed sown outdoors May 1st produced ripe tomatoes in September, and some sown as an experiment, July 4th, gave tomatoes of pickling size in October. The season may be lengthened almost to the holidays by hanging the vines in a sheltered place when frost comes, or laying the unripe but full-sized fruit in a drawer or closet.

Young tomato plants are damaged by too much moisture, but a lack of it, when they are forming fruit, will give wrinkled and poor shaped tomatoes. The fancy sorts grow in clusters of a dozen, more or less; this adds to the attractiveness of their appearance and causes them to be easily picked.



Birds that Kill Snakes

By W. C. Fitz-Gerald



WHAT use are snakes?" is a question often asked by the student of Nature. They do not gratify the esthetic sense, as other useless creatures do, but are loathly and pernicious, and altogether a mistake. Surely they are one of Nature's abortions or failures? Every other created thing views them with horror—men and monkeys, beasts of prey, and reptiles, and birds. Not to mention the owls, kites, carrion crows, and ravens, which all have a bitter antipathy to the ophidian race and kill them wherever found. Even though they may not always devour the mangled remains, there are hosts of birds who gain their livelihood by assiduously seeking poisonous serpents.

Ask the Australian colonist which of the many queer birds that adorn his primitive forests he holds in most reverence, and he will instantly name the "laughing jackass," as he calls the giant kingfisher (*Dacelo gigantea*). Its note does certainly resemble a donkey's bray. The dacelo lives almost entirely on poisonous reptiles, in which the island continent is inconveniently rich. And he varies the diet only by lizards—especially venomous ones; also frogs and toads, cicades, and tree-leeches. He never catches fish after the manner of his American or European kindred. I have seen one of these singular birds catch a deadly snake.

It was a hot day in the Blue Mountains of New South Wales, and I had been tramping through almost shadeless bush for some hours. At last, reaching a big mimosa I sat in its shadow on a fallen tree trunk; for it is almost the only one of the Australian trees that does not turn the edge of its leaves to the sun; this accounts for the curious shadelessness of the antipodean bush. Suddenly I beheld a big dacelo in one of the gum trees opposite. He was sitting motionless, as I had seen his American namesake over pond or trout stream.

He startled me with an abrupt dash to the ground not far from where I sat, and a few seconds later flew back to his perch with something wriggling in his big fierce-looking bill. It was a carpet snake that had been basking in the hot sunshine just beyond the shelter of the mimosa clump. The dacelo had seized the reptile by the neck and held it in a vice-like grip, despite its violent struggles and writhings. And now and then the angry bird would bang its prey's head against the hard bough of the gum tree until he had reduced the evil-looking deadly thing to mere harmless pulp. Then only did he relax his hold, to toss the dead snake, limp and lifeless like a strip of hide, high into the air.

Very cleverly did the bird catch it by the tail, and proceed to engulf it in its capacious maw. The coiled-up remains of the reptile formed a projecting mass on the bird's breast that was fully visible from where I sat. So far the jackass had been too busy capturing and preparing the snake to notice me, though I sat within ten yards of him. His banquet done, however, he caught sight of me, ruffled up his feathers fiercely, and with an eerie shriek compounded of laugh, groan, and bray, flew off noisily to digest his capture.

As the intestinal tract of the dacelo is short, digestion is not a lengthy process. Consequently he eats often, and from dawn to dusk is industriously after snakes, being on that account first favorite of the woods with squatter and bushman, who protect the bird from every pot-hunter.

The Australian magpie or singing crow is also a serpent killer, as is the native crane and several others. This crow, handsome, lively, and clever, is known from Sidney to Fremantle for his black and white coat and startling diet of centipedes, scorpions, and poisonous snakes. He, too, first kills his prey, throws it into the air with a song of triumph and then disposes of it at leisure.

The "native companion," as the Australian crane is called, is no mean antagonist of the ophidian race, of which it destroys hundreds of thousands. Its method of killing is peculiar, for it stamps on the reptile with the full force of its leg, retracted up to the body and then propelled downward like a piston rod with all the bird's strength on foe and prey. And to make assurance doubly sure the crane strikes a quick succession of blows that crushes the last vestige of life out of the mangled reptile, which is then swallowed with no more ado.

I fear the natural history books of one's childhood are very far astray when dealing with another snake-eater, the Secretary-bird of South Africa (*Serpentarius reptilivorus*). More than once I have seen this curious creature—half vulture and half falcon, with a suggestion of the crane—tackling a big snake just as the native companion of Australia does; that is to say, never touching it with beak or wing, but always stamping on the squirming folds with its powerful legs, disabling the reptile at the first blow and finally dislocating all the vertebræ.

Should the snake show fight, the secretary-bird seems to tighten all its feathers about it, hopping briskly here and there, with all the "foot-work" of the veteran pugilist, so as to avoid the desperate onslaught. Such contests can only end one way, and the crushed serpent is soon reposing harmlessly in its living tomb. Another Australian bird, known as Jardine's Harrier, is a serpent-killer of great ability, especially endowed by Nature with legs of great length mailed with strong yellow scales, quite impervious to ophidian teeth. It also kills and eats frogs, newts, lizards, and other reptiles.

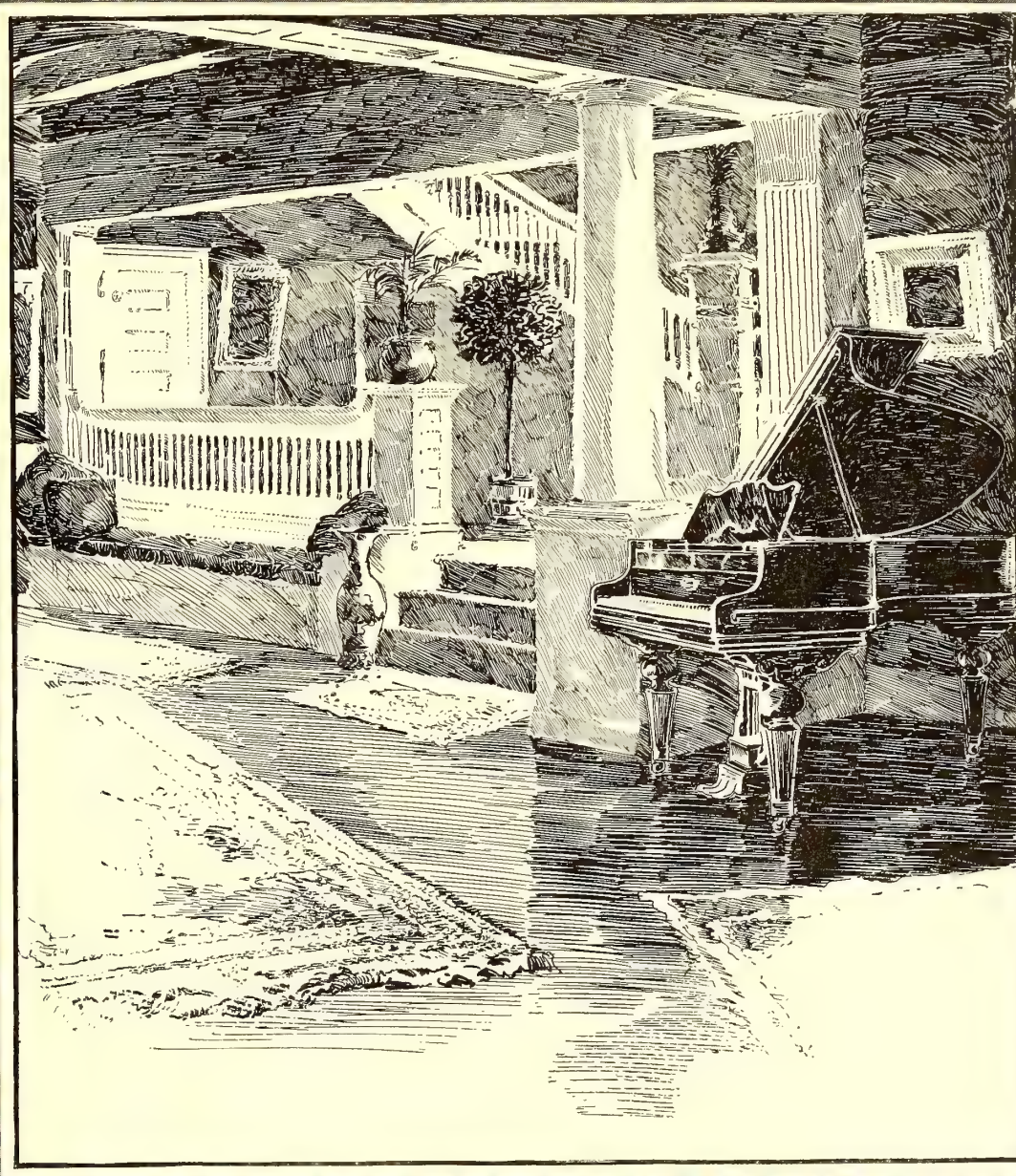
The harrier, besides the pied crow and the laughing jackass, is of great value to Australia, which contains so many varieties of deadly snakes. It seeks for them on the wing, hawking at no great distance from the ground over the hot and stony places frequented by them. With a sudden sweep the reptile is grasped by the neck with one powerful foot, and then the harrier soars high into the air and kills its reptile prey by dropping it on rocks or hard sun-baked earth from great altitudes.

The Indian adjutants and cranes of all kinds, Manchurian and Dutch, are also snake hunters. Indeed, in India the adjutant is treated with as much consideration as the sacred monkeys of Hanuman, and woe betide the inexperienced tourist or visitor who tries to shoot one of these curious birds.

Then there is the burrowing owl of the South American pampas, who preys upon young rattlesnakes, following the creatures into their own holes. These birds also are respected, and with cause. For there is no greater foe to all warm-blooded mammals than the poisonous snake; and any bird with cleverness and courage enough to kill one and dine off it afterward, well deserves our gratitude and protection.

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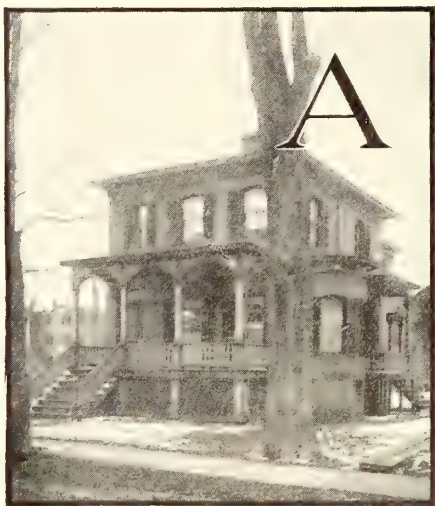


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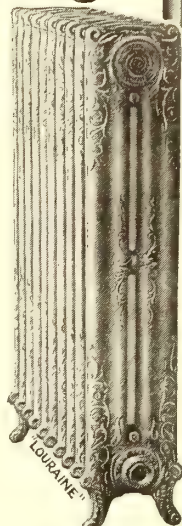
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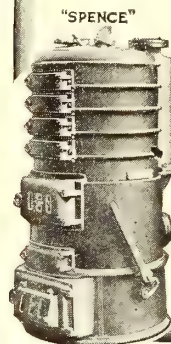
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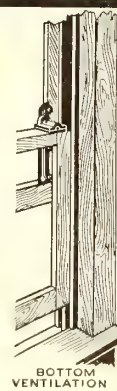
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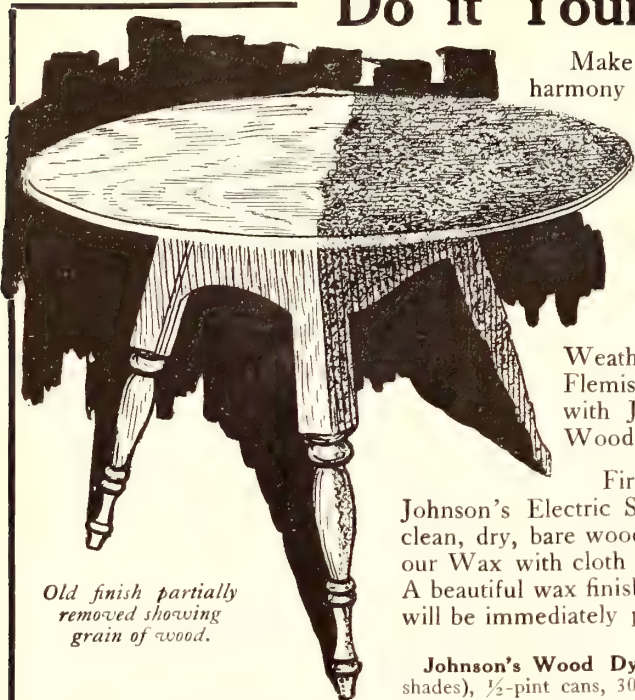
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GARDEN WORK FOR JUNE

By Eben E. Rexford

THE cultivator should be kept going pretty busily this month in the vegetable garden. Keep the soil well stirred. Allow no weeds to get a start anywhere in the rows, or between them. Thin out where plants stand thickly. Aim to give each one you have ample room for development. If there are vacant places, set out some of the plants you pull out of the rows. Never let any garden space go to waste.

A second sowing of lettuce can be made now; also of radishes. Early, quick-growing vegetables can be enjoyed throughout the greater part of the season by repeated sowings. Sow spinach and beets this month, for early fall use, and you will find that they give pleasing variety to the bill of fare at a time when most persons have tired of some of the autumn vegetables.

Keep the summer squashes well picked off. Allow only two or three to ripen, if you want to prolong the season of this toothsome if not very nutritious vegetable.

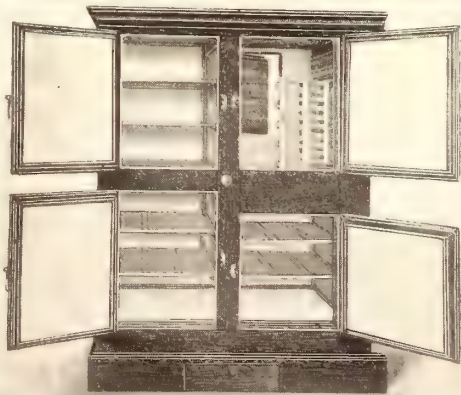
See that the lima and other pole beans are given good support. Poles should be at least eight feet high, to allow for full development.

Tie the tomato plants securely to their trellises. Use inch-wide strips of stout cloth rather than strings, as the latter are likely to cut into the somewhat tender stalks. If flat supports of lath or strips are given, no tying will be necessary, as the branches can be spread out over the wood, and their weight will keep them in place. But I would not advise this kind of support, as the leaves shade the fruit and interfere with its early ripening. Perpendicular trellises are better, as these allow the sun to get at the plant from both sides.

If the old strawberry bed has outlived its usefulness, make preparations for a new one as soon as the season's crop has ripened. Spade up the soil to the depth of a foot, at least, and work it over until thoroughly mellow, adding a liberal quantity of fertilizer as you do this. Do not set new plants until about the first of August. If the old beds are still in fairly good condition, they can be greatly improved by going over them with a spade and turning under at least half the old plants. If originally planted in rows, do your spading in the row. This will give you stronger plants, as those between the old rows will have been produced from runners of this season's growth to a considerable extent. It is an excellent plan to go over this part of the bed also, thinning out the plants wherever they seem too closely massed. If this method is employed year after year, and plenty of good fertilizer is used, it is possible to keep the same plot of ground in strawberries for a period of years, with a reasonable prospect of a fair crop annually. But the best results are secured by making new beds at least every third year. If this is done, shift the location if possible.

Keep watch of the currants. If worms attack them, make prompt use of Paris green. Be sure that it gets to the underside of the foliage. It is advisable to go over the bushes and pull away all new stalks that start from the base of each plant. If you desire to renew the bushes, let three or four stalks remain, and cut away the old growth as soon as its crop of fruit has ripened.

Be on the lookout for insects. If bugs attack the potatoes, apply Paris green, dusting it over the plants while they are moist with dew. Mix the poison with land-plaster or road-dust in the proportion advised by the dealer of whom you purchase it. If too strong a preparation is used, the plants will be injured by it. Experience has proved that a small quantity of



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THE NEW AGRICULTURE

By
T. BYARD COLLINS

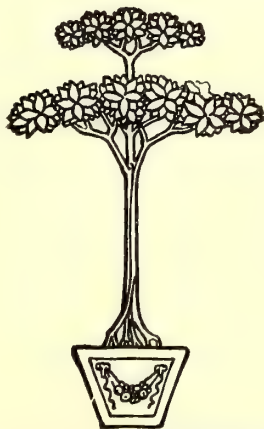
8vo. Cloth. 376 Pages
100 Illustrations
Price, \$2.00, Postpaid



HIS new and valuable work sets forth the changes which have taken place in American agricultural methods which are transforming farm life, formerly so hard, into the most independent, peaceful and agreeable existence. Farm life to-day offers more inducements than at any previous period in the world's history, and it is calling millions from the desk. The present work is one of the most practical treatises on the subject ever issued. It contains 376 pages and 100 illustrations.

In brief, the Contents are as follows

- CHAPTER I. This chapter contains a general statement of the advantages of farm life.
- CHAPTER II. Deals with the vast systems of irrigation which are transforming the great West, and also hints at an application of water by artificial means in sections of the country where irrigation has not hitherto been found necessary.
- CHAPTER III. Gives the principles and importance of fertilization and the possibility of inoculating the soil by means of nitrogen-gathering bacteria.
- CHAPTER IV. Deals with the popular awakening to the importance of canals and good roads, and their relation to economy and social well-being.
- CHAPTER V. Tells of some new interests which promise a profit.
- CHAPTER VI. Gives a description of some new human creations in the plant world.
- CHAPTER VII. Deals with new varieties of grain, root and fruit, and the principles upon which these modifications are effected and the possibilities which they indicate.
- CHAPTER VIII. Describes improper methods in agricultural practice.
- CHAPTER IX. Devoted to new machinery by which the drudgery of life on the farm is being eliminated, making the farm a factory and the farmer the manager of it.
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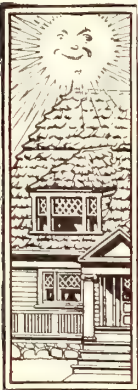


This illustration shows a most pleasing example—the lines are simple and chaste—the dark green tile of rough texture harmonizes admirably with the tinted unfinished plaster of the room, while the beamed ceiling and dark Mission furniture make it into a beautiful picture.

The greatest care should be exercised in the selection of a good mantel; it should be the best that can be afforded, of design and coloring that harmonizes perfectly with the furnishings of the room and one which is not the freakish thing of a season but a mantel that you will grow to like better every time you study it.

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A correspondent asks this question. Do you advise turning house-plants out of their pots, and setting them in the garden? To which I reply, No.

A plant put into the ground will send its roots far and wide on all sides. Of course it will make a vigorous growth, because it has an opportunity, at last, to grow naturally—such as no plant confined to a pot ever has—and the owner will fancy, because of this luxuriant development, that her plant is going to receive great benefit from planting out. It does receive such benefit for the time being. But by and by, when the plant has to be lifted and potted, preparatory to its return to the house, there is quite a different story to tell. It will be necessary to cut away nearly all the roots that have grown since it was planted out, in order to reduce it to the pot-room you can give it, and in doing this you give it a check quite severe enough to offset all the benefits resulting from its summer sojourn in the ground. It will not have recovered from this check by the time it must be taken indoors, consequently it goes into winter quarters in an enfeebled condition, and it will be long past the holidays before it gets fairly under headway again. Keep the plants intended for use in the house next winter in pots the year round is my advice. They may not make such rampant growth as those in the garden beds, but it will be a growth quite sufficient to meet all the requirements of the window-garden. Your plants will be ready to go into the house in fall, at any time, and they will go in strong and healthy, if you have given them proper care during the summer. If you really care for plants, you will be willing to give them such care as they need throughout the season. It will not seem a task to be shirked, if possible, but a labor of love.

It is not too early to begin preparations for next winter. A fine specimen can not be grown in one month, or two, or three. Plants started in midsummer will not be at their best before they are about a year old, but they will be in prime condition to do satisfactory work in the greenhouse or window-garden the coming winter. Late-started plants will grow well, and will give you satisfaction in that respect, but they will be too small to produce much of an effect as specimen plants, and the probabilities are that you will get very few flowers from them. Their energies will go to the production of branch and leaf rather than that of bloom.

The same advice will apply to such plants as ferns, fine-foilage begonias, and all plants of that class, whose beauty depends largely upon strong development. A half-developed plant is satisfactory, as far as it goes, but the trouble is, it doesn't go far enough. Start these plants now, and grow them to good size by winter, if you would have them afford you the greatest possible amount of pleasure.

Feed the dahlias well. Water them liberally if the season happens to be a dry one. Treat sweet peas in the same way, being careful to keep seed from forming.

Some of our summer flowers are very satisfactory as winter-bloomers. The salvia is one of these (S. splendens). To grow a fine plant for winter, select a shoot sent up from the base of an old one, and cut or pull it away in such a manner that it brings with it a few roots. Put this in a small pot of sandy loam, and keep it there until it has made considerable root-growth. Then shift to a seven or eight-

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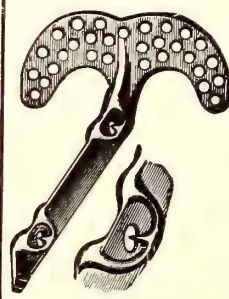
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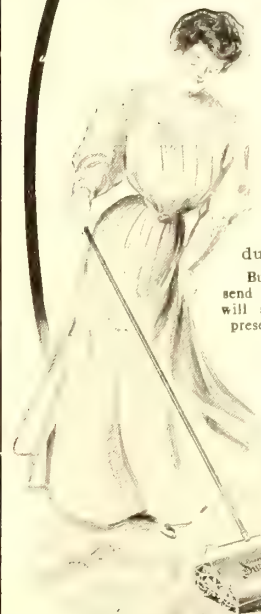
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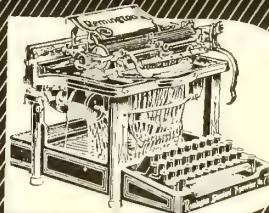
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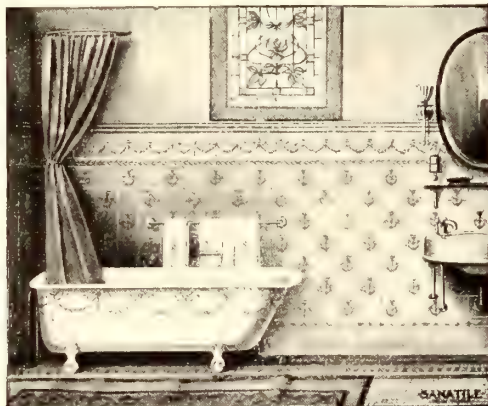
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inch pot, and in October put it into a ten-inch one. As soon as the plant begins to grow vigorously, nip off its top, to force it to branch. Keep it pinched back until it has become as bushy as you want it to be. When allowed to grow up in a straight, unbranching way, it is never satisfactory. Persistent and consistent pinching-back will force the young plant to take on a compact and symmetrical shape. The more branches you have the more flowers you will get, as the flowers are produced at the tips of each branch. Few plants are more ornamental in winter. The long spikes of intense scarlet will glorify the window like a bonfire.

Single petunias make good winter plants. But the double ones are not a success in the window garden in winter. When you find a fine petunia among the seedlings in your garden bed either mark it for potting in fall, or start a cutting from it. Few plants will bloom more profusely, or constantly. If the old branches take on an exhausted look after a while, cut them off close to the pot. New ones will soon start, and in a short time the plant will entirely have renewed itself. Do not use enough fertilizer to produce a rapid, weak growth, if you want many flowers from the plant in winter.

Give your fuchsias a chance to make the most of themselves now. They are summer-bloomers for the most part, and you can make nothing else of them. Feed them liberally and water them well, and give them a shower-bath every day, if you can. They ought to be covered with flowers, under such treatment, until October. A correspondent asks if there are no good winter-flowering varieties of this plant. There are several, like Mrs. Marshall and Black Prince, which will give some flowers in winter if kept from blooming in summer, but they will not bloom freely enough to satisfy anybody who has in mind the lavish bloom of the summer-flowering sorts. Speciosa is the only really good winter-blooming fuchsia. This variety, if kept from using up its vitality by the production of flowers in summer, will give good crops of bloom from January to May. In fact, it will bloom the year round, if fed well and freely watered. It is not as showy as some varieties, but it is really a fine flower, and the habit of the plant is very graceful. It is excellent for use on brackets when allowed to droop. Its flowers are single—sepals flesh-color or pink, corolla bright carmine—and well-grown plants will often show from twelve to fifteen or twenty in drooping clusters at the ends of the branches. Few varieties are more floriferous. If you want a good specimen for next winter, start it now. Give it a soil of leaf mold or turfy matter, with a generous amount of sharp sand worked into it. Provide good drainage. Water well. If the drainage is what it ought to be, you need not be afraid of injuring your plant by over-watering. On no account allow it to get dry at its roots. If it does, you need not be surprised if it sheds its foliage or drops its buds. Shower it frequently all over. This prevents the red spider from damaging the plant and encourages it to luxuriant growth. Keep it where it will get plenty of light, but not much strong sunshine. An eastern exposure is excellent for it. Shift it, from time to time, until you have it in a ten or twelve-inch pot, if you want it to do itself justice. Two things work together to prevent it from doing this—lack of sufficient water at roots and on the foliage and insufficiency of root-room. Be careful about fertilizers. Use only enough to bring about—and hold—a healthy development of branches. Too much results in a weak and rapid growth, and the plant soon suffers from over-stimulation.

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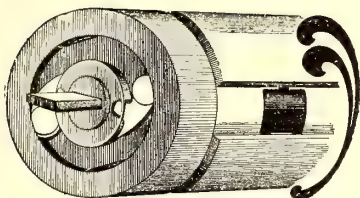
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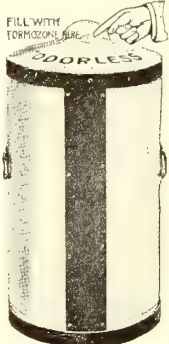
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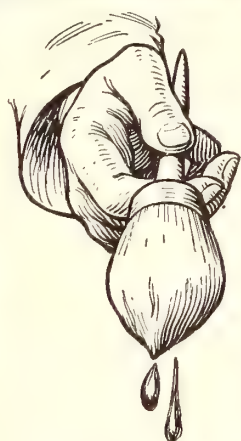
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WINDOW BOXES

By Ida D. Bennett

The best time to begin the planning for window boxes is early in March, when material may be gathering for their filling and lumber or boxes for the boxes themselves. They will not be placed outside until all danger of frost is passed and the nights are warm, but if they may be started inside early and carried out later they will present a much more finished appearance than those started at the last moment and showing more or less evidence of haste.

The window box should be long and narrow—the length of the window frame, and, for ordinary windows, about nine inches wide by ten deep, for oriole windows a somewhat deeper and wider box may be used. They should be painted to match the color of the house or trimmings and supported in the most convenient way—brackets to match the porch trimmings or the cornice are excellent; but whatever form they take they must be dependable as the weight upon them is considerable. They should be placed immediately below the window sill and, where no screens are used in the windows, they may be cared for from within.

The boxes should be made water tight but be provided with a plug to allow the escape of surplus water in a rainy season. A loosely constructed box allows the fertility in the soil to leach away, and, as there is, by midsummer, a mass of roots formed which the water will not readily penetrate, it will run down between the earth and the sides of the box and be lost. It will, therefore, be well in settling the plants in their place to make the soil somewhat lower in the center than at the sides and ends, this will induce the water to settle about the roots of the plants.

The soil will depend somewhat upon the plants to be grown. For all west and east boxes a good garden loam, enriched with old, well-rotted manure may be used, but for north window boxes where a quite different class of plants will be grown, a mixture of loam and leaf mold will be found more satisfactory. This, too, may be enriched with old manure, as the demands upon the soil in the window box is considerable. The boxes should not be filled full, but an inch or two of space left for watering.

Almost any plant may be grown in the window box that one's fancy dictates, it only being necessary to avoid those which make so high a growth as to obscure the windows, or if for any reason tall plants are adopted to keep them well within bounds by constant trimming.

For the sunny west windows there are no better plants than the geraniums in their various colorings. On white, gray or green houses the scarlet varieties are charming, especially when combined with white and heliotrope. For the colonial yellow house, however, one should avoid the bright scarlets, adopting the soft pinks and rose shades instead. For the gray house there is nothing more charming than some of the magenta shades and there is a single petunia which makes delightful window boxes and needs no other flowers but a few graceful vines. Double pink and white petunias are very attractive as window plants, and, when combined with the graceful, feathery bloom of the wild cucumber, are charming indeed.

In the east window boxes plants which do well under the morning sun but find the light too ardent at the south and west, may be grown. Among these are the fancy-leaved caladiums, the tuberous begonias, ivy-leaved geraniums and many others. On the north side of the house may be grown all the tender,



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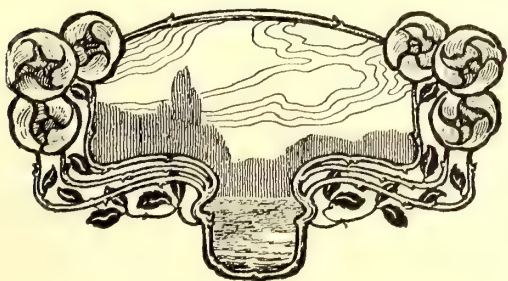
shade-loving plants such as the fuchsias—especially the trailing varieties, the ferns and asparagus vines, begonias and the like. Primroses do very well in north window boxes and will often continue in bloom all summer, and the foliage is sure to be ornamental as the primrose is quite dependent for this part of its beauty on a position where its ferny leaves will not be injured or disturbed.

The window box makes the ideal place for the growing of plants too tender or choice to be bedded out in the open ground and often solves the problem as to what disposition to make of one's cherished house plants during summer. The annuals, too, may be very successfully grown in window boxes and may be depended upon for a wealth of bright color throughout the summer. The scarlet, the white and the pink verbenas; the scarlet, white, buff and pink phlox drummondii are equally charming, while the purple ageratums are beautiful combined with either. Then there are the scarlet and the white anterrhinums and the white camphor geraniums, the candytuft and the sweet alyssum and always the brilliant nasturtiums for vines.

Under the kitchen windows may be grown boxes of mint and of parsley and, if kept back to a moderate size, a plant or two of Celestial pepper.

The following list of plants which may be grown together in window boxes may be of assistance in planning boxes for the various exposures:

West Window Boxes		
Scarlet Geranium	Scarlet Geranium	Scarlet Geranium
White Camphor Geranium	White Camphor Geranium	
Solanum Seaforthianum	Manetta Vine	Solanum Seaforthianum
Second		
Scarlet Geranium	Scarlet Geranium	Scarlet Geranium
White Anterrhinum	White Anterrhinum	
White Maurandia Vine	Var. Vinca	White Maurandia Vine
Third		
Pink Geranium	Pink Geranium	Pink Geranium
Heliotrope	Heliotrope	
Var. Glechoma	Var. Vinca	Var. Glechoma
Fourth		
Pink Double Petunia	Pink Petunia	Pink Petunia
White Candytuft	White Candytuft	
Wild Cucumber	Wild Cucumber	
Fifth		
Scarlet Anterrhinum	White Anterrhinum	Scarlet Anterrhinum
Scarlet Verbena	Scarlet Verbena	
Maurandia Vine	Maurandia Vine	Maurandia Vine
East Windows		
White Tuberous Begonia	White Begonia	White Tuberous Begonia
Pink Ivy Geranium	Pink Ivy Geranium	
Second		
Scarlet Tuberous Begonia	Scarlet Begonia	Scarlet Begonia
Trailing Begonia	Var. Vinca	Trailing Begonia
Third		
Fancy Leaved Caladium	Caladium	Caladium
Passion Vine (Southern Beauty)	Passion Vine (Southern Beauty)	
Fourth		
Pink Justitia	White Candytuft	Pink Justitia
Pink Trailing Abutilon	Pink Trailing Abutilon	
North Window Boxes		
Begonia Feastii	Begonia Argent Guttata	Farugium Grandi
Asparagus Sprengerii	Asparagus Sprengerii	
Trailing Fuchsia		
Second		
Begonia Diadema	Aspisistra	Begonia Manicata Aurea
Sword Fern	Pierson's Boston Fern	
Trailing Abutilon	Abutilon Sprengerii	Trailing Abutilon
Fourth		
Begonia Paul Bruant	Dracena	Begonia Mirabunda
Trailing Fuchsia	Vinca	Trailing Fuchsia

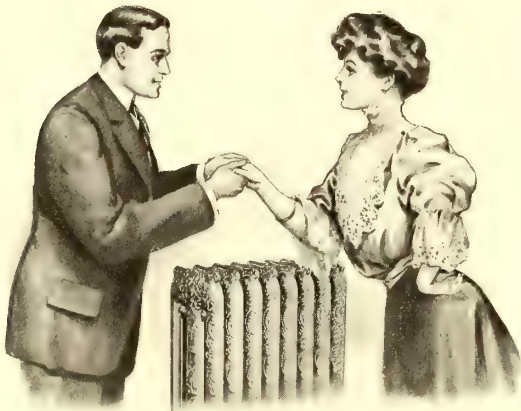


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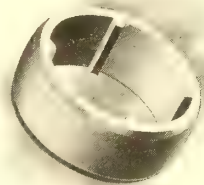


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ORNAMENTAL BEDDING PLANTS FOR HEDGES

By Benjamin Ide

THERE are few grounds, even of limited area, which are not benefitted by the presence of ornamental hedges defining the boundaries of some parts. This may be the line which separates a city lot from its neighbor; the line which marks the limit of the lawn and the beginning of the flower garden, or the line of demarcation between the flower and vegetable garden.

Where the grounds are large, tall growing plants will usually be preferred, but on the small or city lot the idea of space will be best conserved by the use of low-growing plants of a highly ornamental nature. Fortunately there are many choice greenhouse and florists' plants well adapted to this use which do exceptionally well when bedded out in the summer.

As plants used for this purpose should be ornamental from the start, they should either be purchased from the florist, carried over from a previous year or started in house or conservatory very early in the spring from cuttings or seed, though in this case they will not give much size or bloom before mid-summer, but will be in fine shape for placing in greenhouse or cellar for another year.

The soil for these ornamental hedges should be made deep and mellow, both by deep spading and the application of well rotted manure. Where the soil is deficient in humus it should be added in the form of leaf mold or well rotted muck from the marsh. This latter is very congenial to a great variety of plants, but where taken fresh from marsh land should be buried beneath the surface soil, as left exposed it dries into hard, peaty lumps. The culture and water supply should be generous from the start.

One of the most beautiful plants for the purpose, if not the most beautiful, is found in the Chinese hibiscus. This is a very ornamental, hard-wooded plant with stiff, glossy leaves, which are in themselves beautiful, and immense hollyhock-like flowers, both single and double, but of exquisite texture and curious crinkled effect. The colors range through the various shades of peach, pink, crimson, scarlet, orange and yellow, the double scarlet H. mineatus being, to my mind, the loveliest. The peach-blow hibiscus, most commonly met with in the greenhouses, is a far better color in the open ground and is one of the best to bloom. The blooms are immense, often measuring five inches across, and the effect of a large plant in full bloom is magnificent indeed. They should be given sufficient room to develop into bushy plants, and during dusty weather should be frequently showered to preserve the beauty of their waxy leaves. Their propagation is somewhat difficult, but the plants may be bought at a very reasonable figure of most florists.

Another fine plant for ornamental hedge planting is found in the lantanas. These make very bushy plants when planted out in the open ground, and given liberal culture. Quite small plants purchased of the florists in the spring will make bushes three feet in diameter by midsummer and be literally covered with their heads of fragrant bloom. But they must have room, sunshine and abundant food and water. In colors the lantana ranges through the scarlet, pink, white and orange shades, one of the prettiest being the white with yellow eye.

Their culture from seed is so simple that it should prove a favorite method of propagation. The seed, which is really a little nut in a husk which is to be removed before planting, is divided like a walnut or pecan into halves, and often presents the curious phenomena of producing two plants from one seed. They may be started in flats in the house in February,



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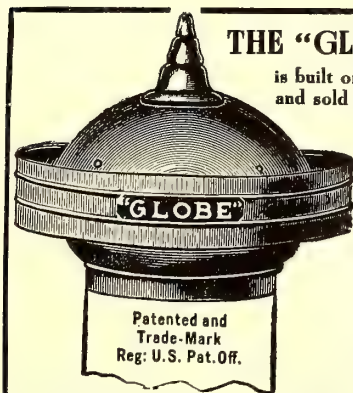
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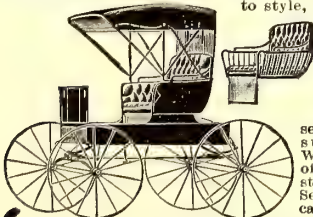
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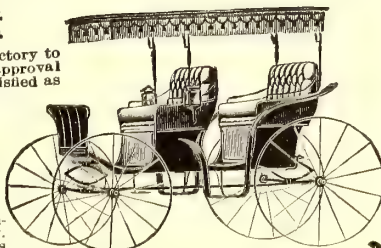
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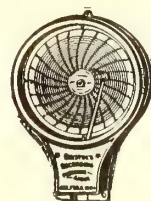
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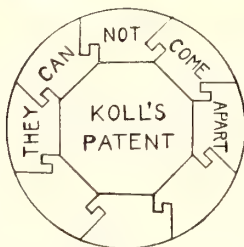
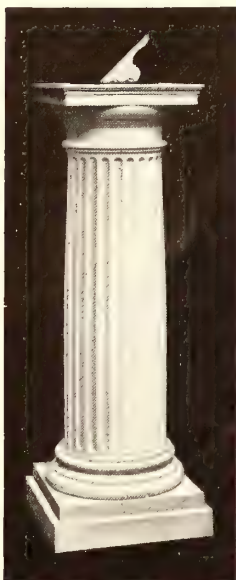
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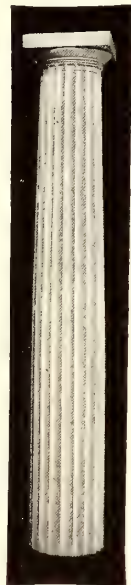


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The several species of abutilons make handsome and effective hedges; especially is this the case with the variegated foliage section, many of which have handsome and striking flowers. The colors range from pure white through shades of most delicate shell pink, rose, straw color, crimson, orange and purplish rose; they produce single bells, double blooms of daintiest crinkled silk, with centers somewhat resembling that of the hibiscus or hollyhock. They may be easily grown from seed sown early in spring and planted out when the weather is warm.

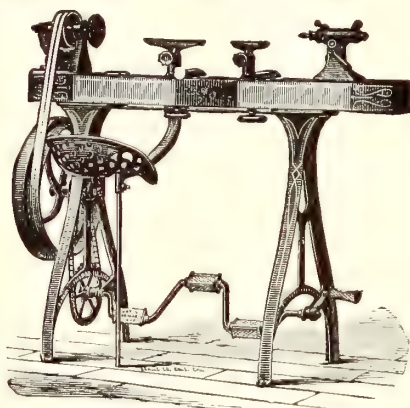
The crape myrtle, though rarely seen at the North, is one of the most beautiful of our flowering shrubs and covers itself with a perfect shower of lovely crape-like blooms of pink, of crimson and of pure white throughout the greater part of summer. The foliage also is attractive, but the plant needs some pruning, as it is a little inclined to grow somewhat straggly. It may be obtained of most Southern florists at a reasonable price, and where ordered in large quantities by express large plants will be furnished that will give immediate effect.

Somewhat lower in growth, but of sturdy, robust habit, the various justitias are much to be recommended for ornamental hedges. There are two colors in common culture—a rosy pink and an orange, the former being the more desirable. The plants should be pinched back when small to encourage a stocky growth, and after each bloom fades it should be removed, the tip of the branch which produced it then branching out into two shoots which quickly produce a double tuft of flowers, these branches again dividing into new branches, the flowers being always produced on this new growth. The plants are very easily propagated from cuttings stuck in wet sand or in water, and are of the easiest culture, and nothing could be showier or more desirable for outdoor use.

For taller hedges the single and double brugmansias are delightful. The single has great satiny trumpet-shaped flowers of creamy white which open at night and are delightfully fragrant; the foliage is large and tropical looking in the extreme and the growth is rapid and vigorous, small plants set in the spring producing by fall stocky, shrub-like plants four or five feet tall and covered with their great blooms. The general characteristics of the double form are much the same, but the plant comes into bloom later, and is therefore not so desirable, but both may be taken up in the fall and carried indoors for winter blooming.

Among the lower growing ornamentals should be listed the vincas—beautiful, waxy-leaved plants with starry blooms of white, of white with crimson eye and of crimson. In general appearance the plants much resemble the jessamines; the manner of growth and florescence is most attractive, and as the plants lift well, they may be taken in for winter blooming, and are most ornamental for decorating corridors and drawing-rooms and for banking staircases for receptions or other social functions. They are easily raised from seed, which may be sown in the house or hot-bed in March or early April and transplanted into the open ground as soon as all danger of frost is passed.

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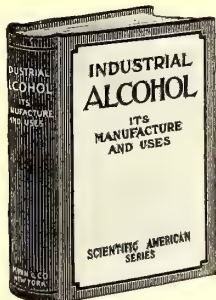
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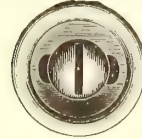
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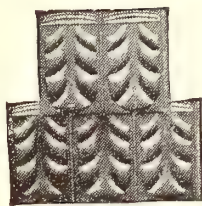


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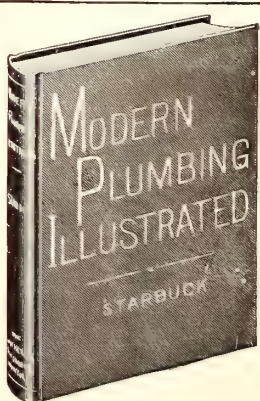
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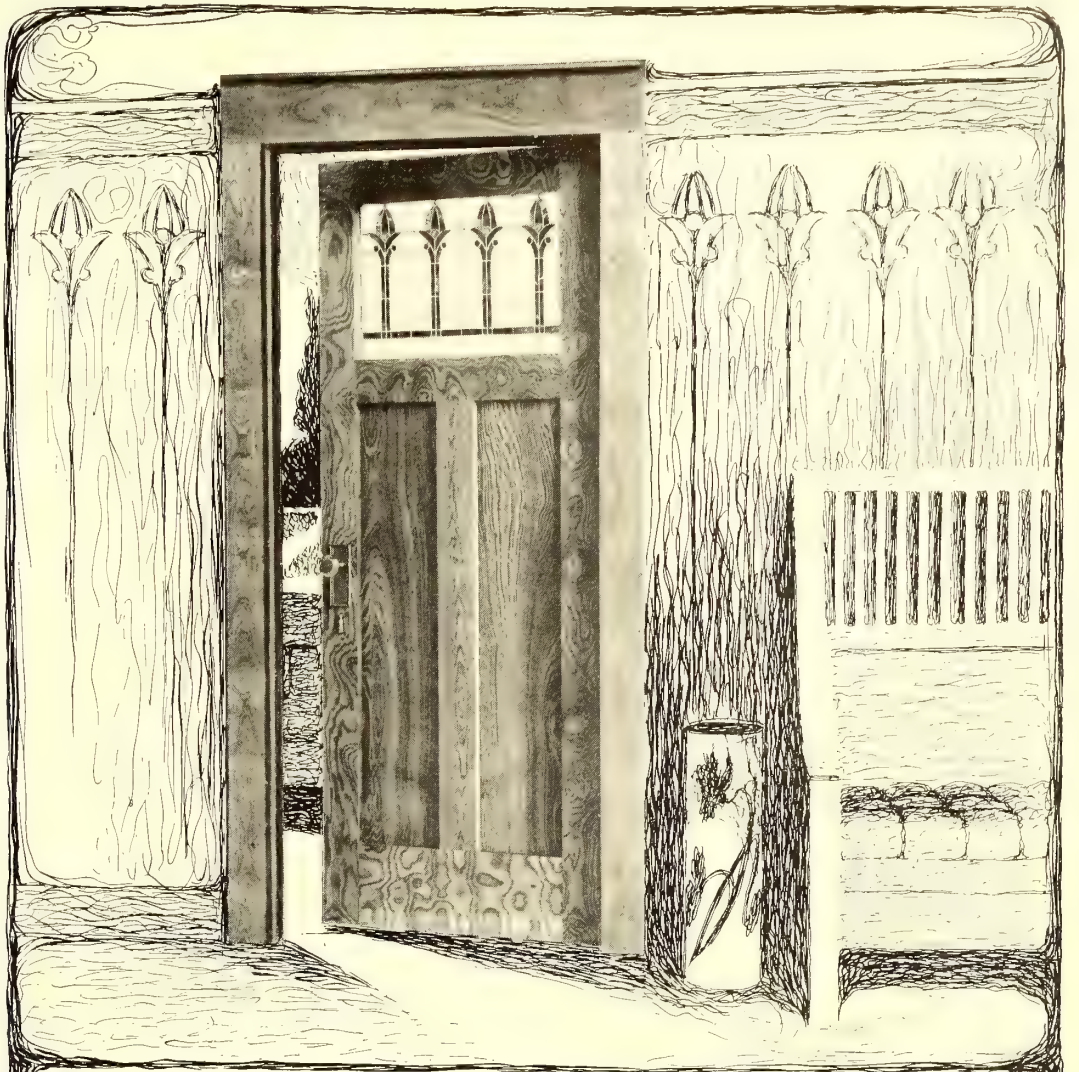


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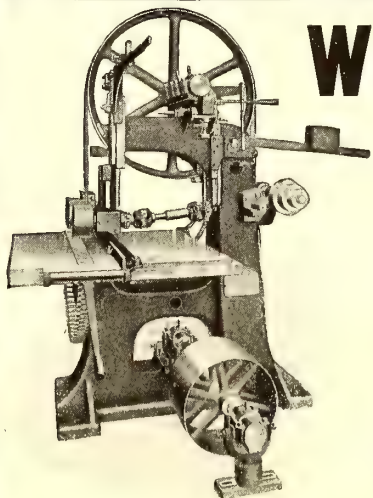
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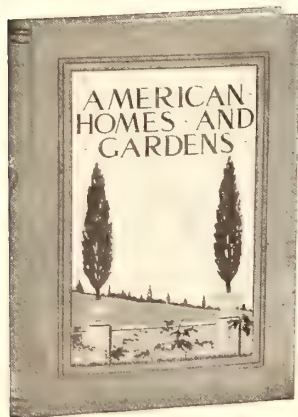


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THE STUDIO YEAR BOOK OF DECORATIVE ART, 1907. New York: John Lane Company. Pp. 228. Price, \$2.25 paper; \$3.00 cloth.

This is a book of wonderful charm and interest. Illustrated with hundreds of illustrations, accompanied with an adequate explanatory and critical text, it is a book that abounds with practical suggestions and helpful information to every one concerned with architecture and the decorative arts; the house-owner and the craftsman alike may find much to enjoy and profit by in its richly illustrated pages. Not, of course, that everything in it is of interest, or even of value—no annual summary of the decorative output of a single people or group of people could be expected to yield such results as that—but taken as a whole, the book is crowded with ideas, and those who look to the work of others for inspiration and enjoyment will here find them in abundance.

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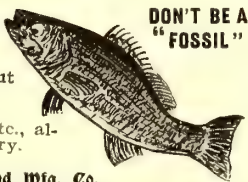
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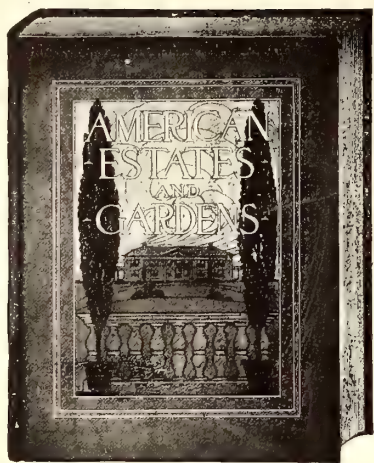
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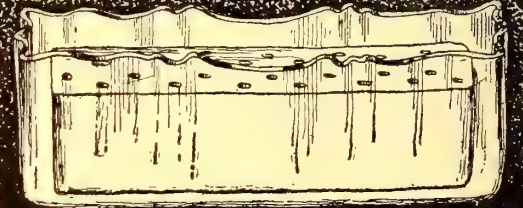
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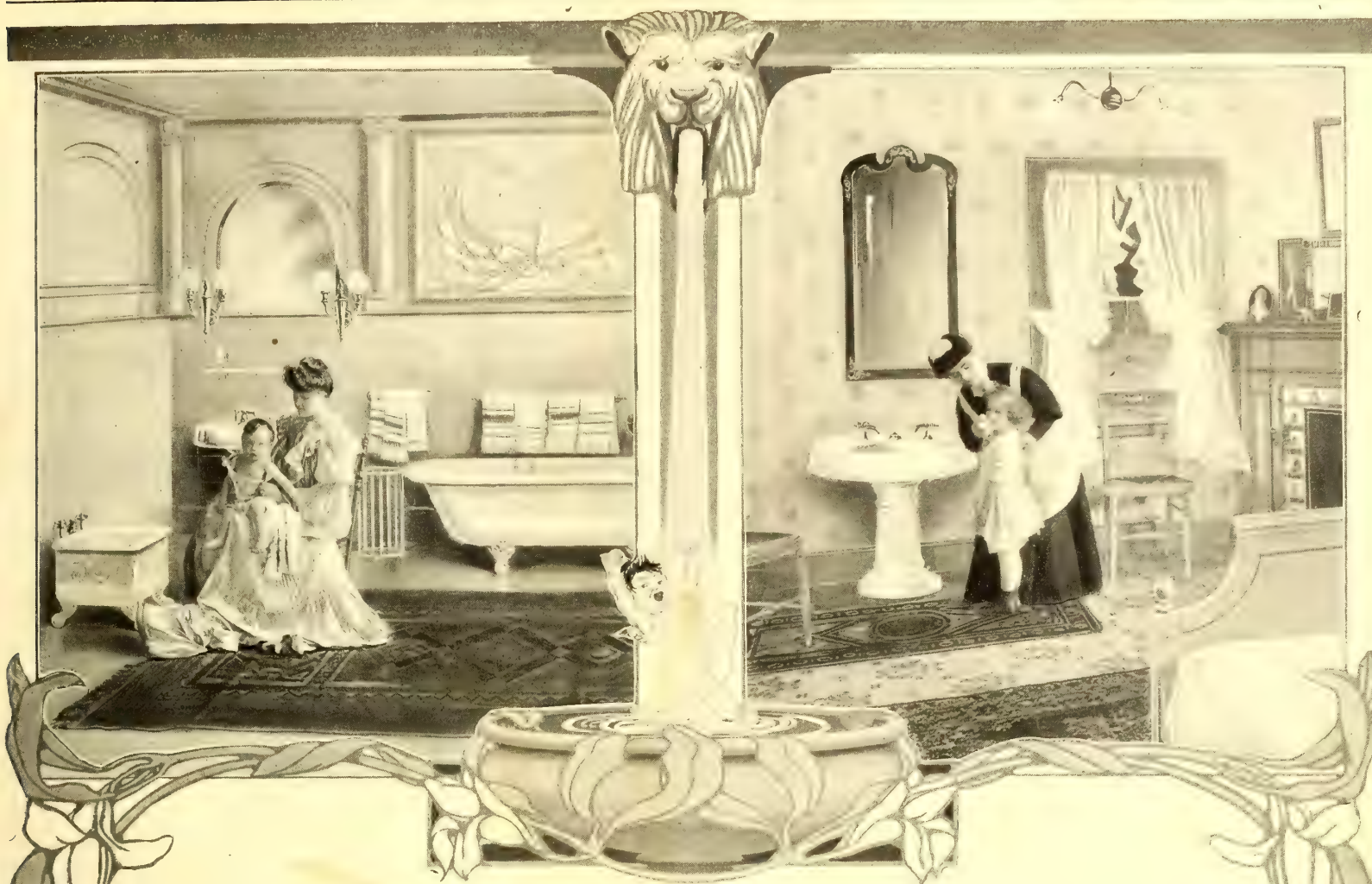
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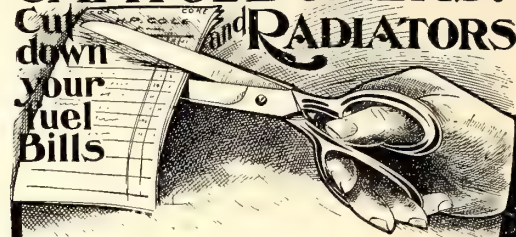
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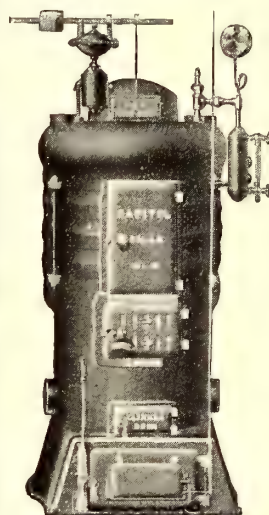
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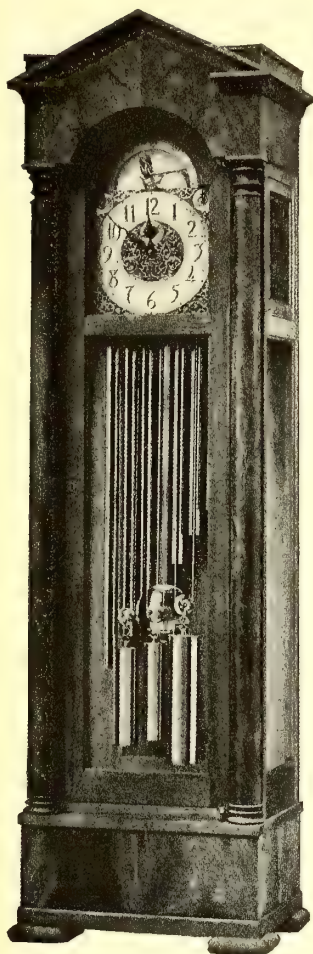
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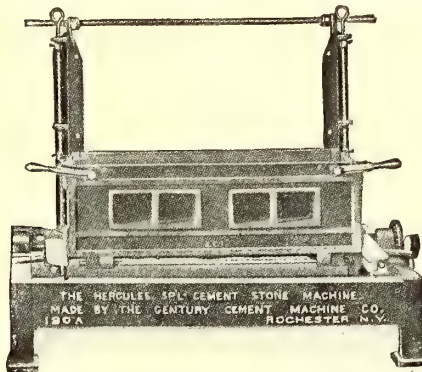
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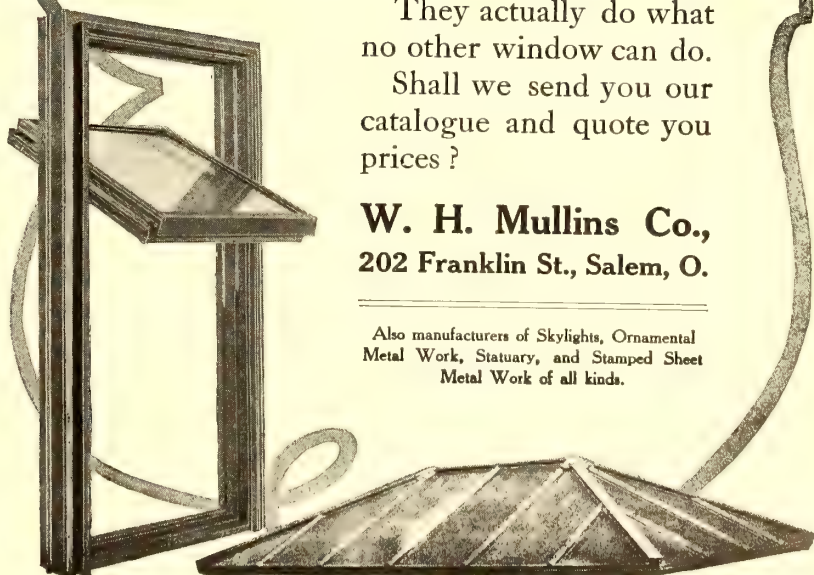
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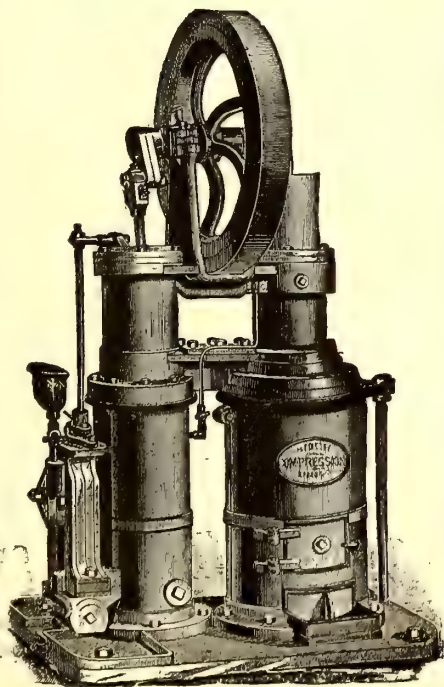
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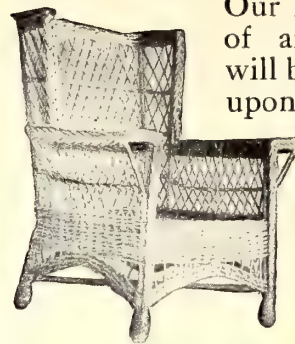
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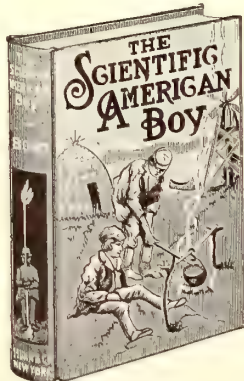
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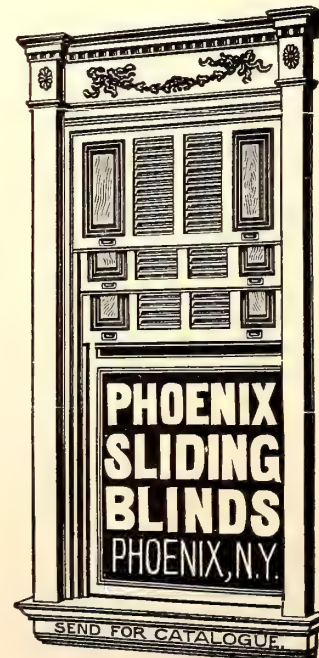
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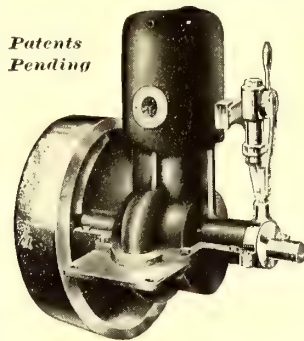
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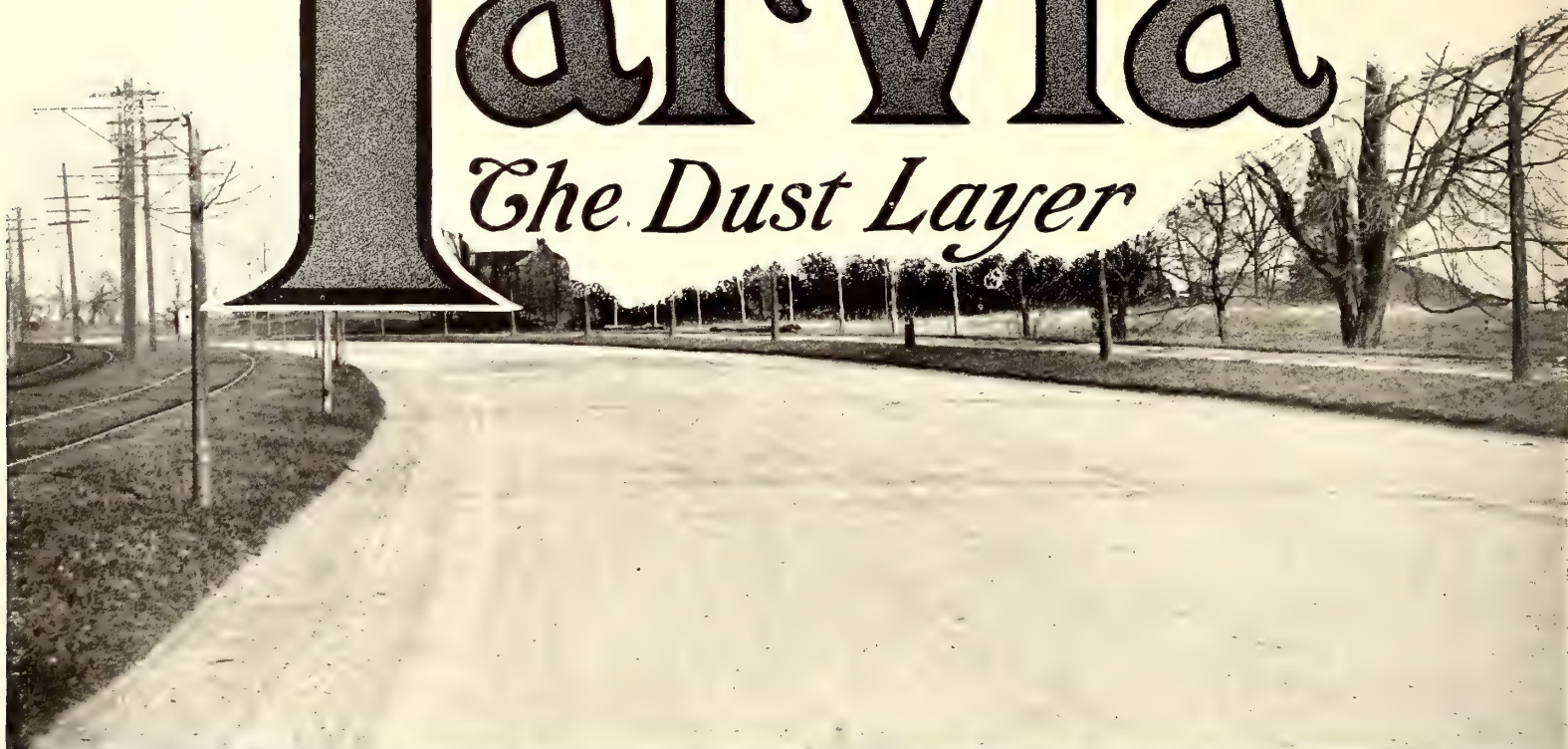
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The Streams of Pure Water Are the Crowning Jewels of Wittenberg Park

AMERICAN HOMES AND GARDENS



Volume IV

July, 1907

Number 7



The Meeting of the Land and Sea

Monthly Comment



THE desire for change, whether of occupation or of location, of scene, air or surroundings, is one of the most ancient and deep-rooted of human inclinations. Very clearly it is a survival of the nomadic instincts of primitive man, who, forced by the necessity of obtaining food and shelter, moved restlessly from spot to spot, changing his abode with the seasons or as the food supply diminished. Thus change has become one of the most marked of human instincts, and is as deeply ingrained in human nature to-day as in the early epochs of mankind. But the modern changes are animated by very different reasons from those that stirred on our primitive ancestors to move. The kind of necessity that impels a modern man to move on is of a very different sort. He moves solely because of a desire for change, to see something he has not seen before; to do something he has not done before; to have a variety in his life; and to benefit himself, mentally and physically, by a complete and radical change. Hence the modern change of scene has nothing in common with the old.

SINGULARLY enough, those who, by their circumstances, would seem to require the fewest changes, actually demand the most. The most persistent vacationers the modern world has known are the wealthy Americans. Their vacations are so numerous, and go so far afield, that the mere record of them consumes columns of valuable newspaper space, and the whole world is agog over their doings and restings. This kind of a vacation stands in a class by itself. Much of it rests on no real necessity, but is due solely to lack of interest in matters close at hand, and, often enough, to a complete lack of occupation. Even to the very lazy there are few things so wearing as having nothing to do and an amplitude of time in which to do it. With the lazy man it is not so much mere hatred of interest, but hatred of performing some laborious undertaking, doing something he does not want to do, and having to go to one place at a set time when he would rather go elsewhere or do something else. But there must always be something to interest him, something to hold his attention, something to entertain and amuse.

HENCE the rich man, devoid of occupation, is the hardest put of all mortals to find entertainment. He has no routine interests, he has no regular duties, he has no definite aim in life save to get through as many hours a day as possible in what he conceives to be an agreeable manner. If there is nothing to do at home he seeks relaxation elsewhere. And so he moves to and fro on the earth, a train of golden dollars streaming out behind him, sometimes engaging in original feats of travel, but ever on the lookout for the new, the new, the new. The most stupendous forms of nature, the most splendid achievements of European masters, the charm of life, the beauty there is in the world, all pall before the insatiable clamor for something new, something that has not been seen or done before.

VACATIONS conducted on such lines yield little good either to the persons immediately concerned or to the world at large. There is a larger class of persons who take vacations because they honestly think they need them, and often honestly do. They go to rest a jaded brain or replenish an exhausted body; they go from work and return to work, and even if this latter be of no broad interest, it is honest work, calling for honest effort, and which, after a vacation wisely spent, will be the better done and with less exhaustion than

before the rest was obtained. It is for such people that the vacation period has become a popular necessity, and it is for them it really exists.

AND how is one to spend a vacation? It is a question that, once asked, had better be passed over. The theory of the vacation is very simple: it is the period in which the person taking it does exactly as he pleases, where he pleases and without regard to the sober callings of life—it is play time. Practically it may be defined in precisely the same way, and the practical question that then presents itself to anyone planning a vacation is, how to get the most desired play in the most practical manner? One has only to inspect the antics of the small boy to realize—if one does not know it otherwise—that what is play for one is not play for another. The vacation that, to one man, sums up every possible vacation delight, may, to another, be wrapped in difficulties so arduous as to be positively irksome. The question, therefore, must be answered by each one in his own way. It must be met in a personal way. If a new project is tried it is sometimes helpful not to be swayed too much by those who are its sponsors.

VACATION is not only play time, but it is rest time. A period of relaxation, its purpose is to fit the person benefitted for better work and better doing on its conclusion. Forget care and responsibility as one should and must in order to obtain the best result, the sort of play and the kind of rest must be carefully considered and planned in advance. A vacation that is taken on the spur of a moment or as a sudden whim is likely to be of small help. If the money cost must be counted in advance, it is equally essential that the mental and physical benefits would be considered in every aspect. Mere change will often accomplish wonders in such betterments, but change alone is not always sufficient, and the wisest will carefully think out and plan their vacations, determine whether such and such occupations are going to be entertaining enough, whether there will be real rest and a real change.

WHILE the vacation period is entered upon gaily by many persons, there is still a very large number who do so only with regret and hesitancy, persons whose narrow means and slender resources make the vacation a matter of great difficulty and often of utter impossibility. The very poor, who do not know what a vacation means, are often helped in the most outspoken way, and turned out to wander among the green fields and to delight in soft woods. But between this class and the well-to-do, there is a vast middle class, who can not afford vacations, and who can not be assisted to have them. Many of these people are in urgent need of the change and rest that the wealthy so glibly toss around them, yet modern philanthropy has found no way to reach these people or to help them as they ought to be helped.

IN arranging a vacation always determine beforehand where you are going and what you expect to do when you get there. Count the cost and make a liberal allowance for unexpected expenses and unexpected demands. If going to Europe remember that days and months spent in studying the guide books is time well spent. If going into the mountains and to the seashore, find out something about the place you are going to. Stay indoors as little as possible, conduct yourself in a rational way, think little of your looks and dress, and have as bully a good time as you can.



"It seems to me I'd like to go
Where bells don't ring nor whistles blow,
Nor clocks don't strike, nor gongs don't sound,
And I'd have stillness all around."



IT WAS a beautiful day in September when the autumnal tints were beginning to show their radiance under the glistening sun, that my host and I landed at the little station at Shokan, in the heart of the Catskills. Here one obtains the first impression of the grandeur and beauty of the Catskill Mountains, for it is here that a cluster of mountains are seen, including the famous High Point, Hanover, Balsam, Mount Cornell and Wittenberg, Cross Mountains and Samuel Point. Everywhere in the land of Rip Van Winkle the scenery is picturesquely beautiful and independently grand, but nowhere has Mother Nature been more lavish with her charms than in this place. It is called "The Gateway of the Catskills." Wittenberg Park is five miles away in a southwesterly direction from Shokan, which is a pleasant little hamlet with churches and shops. The way leads up through the beautiful Watson Hollow, on a good road for a distance of two miles, where we turn sharply to the right with our faces toward Wittenberg. The picture now presented to our view, on either hand, is one of varied mag-

nificence. The first mile of the drive is spent in the land of civilization, and after a few moments' stretch and after rounding a curve in the road, a little schoolhouse is discovered among a cluster of big maples, with which it is surrounded. For the next mile we pass a number of farmhouses, which here and there dot the hillsides, or nestle in a valley by the side of some beautiful stream. The last two miles of the drive is through a depression, between Mount Cornell and Wittenberg, which is well known to all noted

fishermen as Ket-cham's Hollow. Passing along, with Wittenberg always in sight, with her massive head lifting itself majestically above the tree tops, we come to the entrance of Wittenberg Park, in which "Moonhaw Lodge" is built. Wittenberg Park embraces within its territorial area all of the old estate which was once the paradise of the Moonhaw tribe of Indians, and formed a part of a tract of land deeded by them to the white men in 1746. It was here they lived in all their characteristic laziness and savage glory. The mountains were clothed with primeval forests which abounded with game, and the streams were filled with fish, both of which they took without fear of contention, until the crack



Rugged Steps with Cobblestone Balustrade Give Access to "Moonhaw Lodge"



The Wedding of the Waters

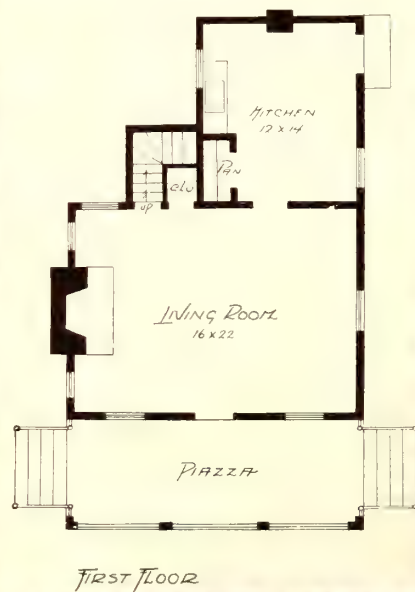


The Living-room Has a Cobblestone Fireplace

of the white man's rifle awoke them from their dreams of savage life. Every foot of ground in this valley is rich with the associations of the past, for here is to be found hard beaten old Indian paths, afterwards utilized as wood roads, crossing and recrossing in every direction. The rocks on either side of the stream stand forth with the same rugged mystery as when they flung back the echo of the Moorish war whoop.

For a full century after the title passed from the red men, the solitude of this grand primeval forest remained undisturbed until in the year 1849 its beautiful growth of hemlock attracted the eye of the lumberman. Mills were built and the valley resounded with the sound of the saw as the work of destruction went on. In a few years the lumberman had completed his work and had robbed these picturesque hills and valleys of their finest features.

This tract of land adjoins the magnificent eighty-thousand acre Forest Preserve, which stretches away to the north and west, embracing within its great area the grandest combination of mountain, forest,



"Moonhaw Lodge" Is Built on the Site

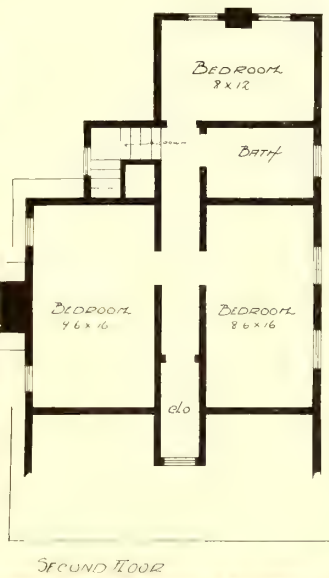


A Forest Green Stain Is Used for the Woodwork

stream and valley in New York, and which is to be kept in perpetuity by the State for the use of its sovereign people.

Wittenberg Park's crowning jewels are its streams of pure, clear, cold waters, of which there are more than two miles within its limits. They are alive with the finest specimens of the gamey *Salvelinus fontinalis*, the genuine speckled brook trout of the Catskills. These streams spring into life far away amid the rugged beauties and tangled foliage of the Wittenberg and Cornell mountains, where here, there and everywhere, under high moss-covered rocks, which are piled on each other in chaos, are marvelous veins of water which trickle down, forming beautiful mountain streams which flow through one of the most charming glens in the world. For over a mile, as it winds and turns over in its rough, rocky bed, it is a succession of impressive pictures, with cascades and waterfalls innumerable, no two alike, and all beautiful and picturesque.

In its darkest recesses where Mount Cornell and the Wittenberg cast their deepest shadows, the scene is singularly wild, strange and desolate. It is only a few miles from civilization, yet with the exception of



SECOND FLOOR



The Drive and Wittenberg Mountain

Formerly Occupied by the Old Moonhaw Chief



The Wedding of the Waters

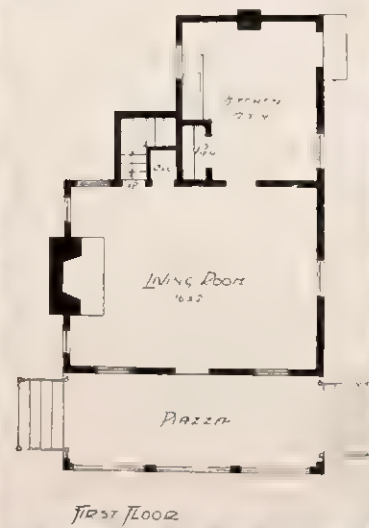


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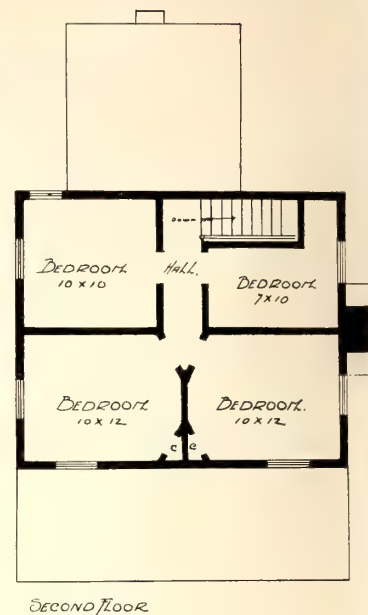
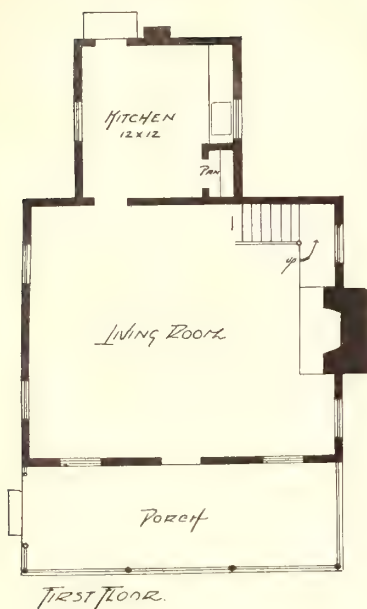
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The Drive and Wittenberg Mountain



"Rock Ledge," Mr. Rose's Camp, Is Constructed of Log Slabs

the deer which browse beside it, the bears which lap its cool waters, and here and there a stray fisherman, the lonely stream ripples and eddies and murmurs in utter solitude.

"You fellers from the country—you keep away from town,
If you don't want to unsettle things and get us upside down;
For you always leave a memory of the meadows and the stream,
And I straightway get to wishin' and to fishin' in my dreams."

The "Wedding of the Waters" takes place in front of "Moonhaw Lodge," where two of these streams greet each other and pass on as one.

It took my host, the Hon. Charles T. Coutant, of Kingston, N. Y., in his wanderings through the mountains to discover this great beauty spot in nature, and as he was so greatly impressed with its infinite treasures of natural beauty, he immediately purchased the property in its entirety, and decided to convert it into a handsome mountain park to exceed in beauty anything of its kind in that celebrated section. He has built roads, cobblestone and rustic bridges, and has thrown rough stone walls across the streams to retard some of their rapid progress, thereby forming myriads of small waterfalls, terminating into a pool beyond the bridge, at the foot of the glen.

"Not real still stillness but just the trees'
Low whisperings or the hum of bees,
A brook's faint babbling over stones
In strangely, softly tangled tones."

"Moonhaw Lodge" is built upon the original camping site of the old Moonhaw chief. Just before reaching the Lodge, one stops and admires the great bridge, which is built of selected cobblestone taken from the grounds of the estate. On one side of the bridge is a wall fountain supplied by a cooling stream, which affords water for beast, bird and man. This cobblestone work leads along in the form of a fence to the steps that follow up to the Lodge, which is perched on an incline at the fork of the road and rivers. The Lodge has a cobblestone chimney built on the exterior of the building, which is the chief feature of the outside walls. The exterior walls are covered with matched sheathing, good building paper and shingles left to weather finish, while the trimmings are painted red. The roof is covered with shingles and stained a deep Indian red. After passing across the piazza, which extends across the front of the Lodge, the entrance is reached. The interior is arranged with one large room in the front of the house and a kitchen placed in the rear, while the second floor contains the sleeping-rooms.



The Cobblestone Steps and Chimney Are Interesting Features of the Camp

All of the timberwork on the interior is dressed and exposed to view. The living-room throughout is stained with a soft forest green. At one end of the room is a great open fireplace, built of selected cobblestone. The mantelshelf is of rough hewn stone and is ornamented with Indian relics and curios. A divan nook is placed at the opposite end of the room. This is a true living-room, in which the family really live and in which the meals are served. The kitchen is fitted with a pantry, sink and cupboard complete.

The second floor contains two bedrooms, bathroom and trunkroom. The bathroom is furnished with porcelain fixtures and exposed plumbing. The cabin cost less than one thousand dollars to build. Mr. Coutant planned his own lodge, and the services of an architect were not required.

"Rockledge," the camp built for Mr. A. E. Rose, just across the stream from "Moonhaw Lodge," and illustrated on page 248, is constructed of log slabs placed on the framework with the bark on them. Stone steps with cobblestone balustrades conduct one to the front piazza. The front door is made of slabs and opens into a large living-room, which occupies the main part of the first floor; it is used for dining as well as for the general living quarters of its inmates. The walls are covered with white birch bark, and there is a rustic staircase, with columns and a balustrade of birch sticks, leading to the second story. The large open fireplace is built of cobblestone with rustic mantelshelf. Beyond the living-room is the kitchen fitted with pantry, sink and cupboard. There are three bedrooms on the second floor. Mr. Rose also built his cabin without the services of an architect, employing local workmen to do the work under his direction.

The camp of J. E. Klock, Esq., known as "Cosycote," illustrated on this page, is just across the road from Mr. Rose's camp, and is built practically with the same exterior and interior treatment.

The exterior is changed a little in that its second story and gables are covered with shingles. The stone chimney built on the exterior is an attractive feature of the cabin, for what would a camp be without its great open fireplace and stone chimney? The interior is treated in an artistic manner. The exposed studding and sheathing and floor joists are dressed and stained in soft tones, giving very restful effects. Four bedrooms constitute the arrangement of the second floor in Mr. Klock's cabin.

The plan of Mr. Klock's camp was practically the same as that used for Mr. Rose's camp, and was built in a similar manner, except that the living-room has a settle of rustic character thrown out at either side of the fireplace. There

was no difficulty in securing plenty of cobblestone for fences, bridges, chimneys, fireplaces and foundations, just as there was plenty of timber, logs, slabs, which could be obtained easily, with which to build the exterior of the camps.

With the cost less than a thousand dollars for each of these camps, it can be easily seen that one may possess a mountain camp without the need of a great outlay of money.

The houses I have described strike, it seems to me, the true note of woodland living. One can not carry into the woods all the advantages and resources of civilization, yet many of these one should

have and must have. The problem of civilized life in the woods is a much more difficult one to solve than is generally supposed. It is impossible, even for the most ardent lover of the simplest life, to get along without a certain amount of the resources of civilization, I might almost say without some of the luxuries of civilization. On the other hand life in the woods can only be successfully accomplished with the absence of many of these conveniences and luxuries. The most successful solution of the problem arises in reaching a happy medium between these two opposed points of view.

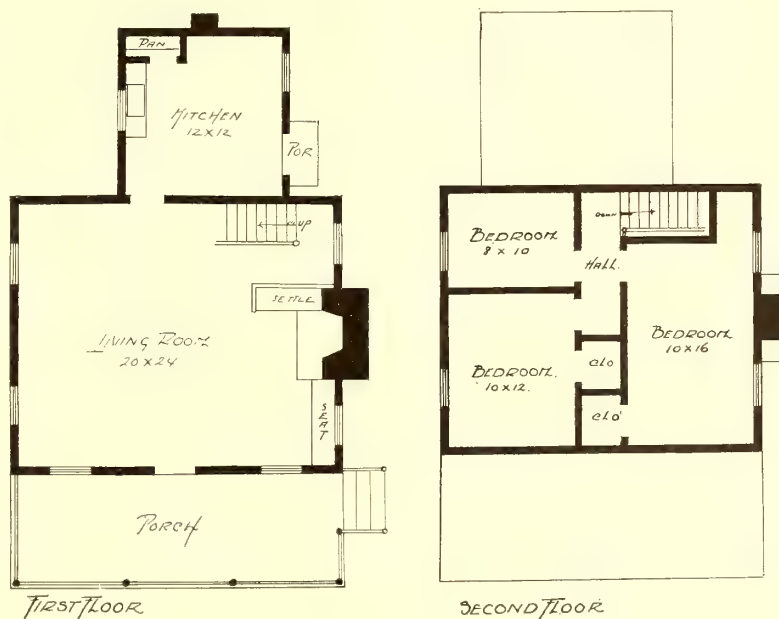
This medium seems to me very happily reached in the dwellings in Wittenberg Park. They are not bare camps, nor are any of them luxurious houses. They are dwellings in the wood and of the wood, nothing more and nothing less. They are dwellings

at once habitable and suited to their wonderfully beautiful environment. They are built of materials obtained close at hand, and are, in every sense, wood cottages. Simple and unpretentious as they are in their plans, they are amply sufficient for every creature comfort and are thoroughly adapted to the needs of their occupants. Than this, I can imagine wood dwellings giving nothing more, and these offer instructive suggestions to any one having similar dwellings to build.

Nor is it possible, at any time, to forget the beauty of their surroundings. These are not merely close at hand, but extend for miles in every direction. The vistas and views, the deep woods, the running brooks, the wild undergrowth, the wood life in its every aspect, give to Wittenberg Park charms of a most unusual order.



"Cosycote"—Mr. Klock's Camp, While Similar to Mr. Rose's, Has a Different Arrangement of Rooms



A BOYS' SUMMER CAMP



By Phebe Westcott Humphreys



Inexpensive Vacations Close to Nature



NO OTHER summer pleasure is more helpful to the coming man, if it be reduced to the proper system, than camp life in the woods; where in what might be known as a model instruction camp, as well as a co-operative camp, the boys work and think it is play.

Many a mother is anxiously inquiring how her boy can secure the most desirable rest from school studies and derive the greatest benefit mentally and physically during the vacation months, and how he can spend his summer leisure in recreation that combines the greatest amount of practical instruction.

Let him try camping out, is the reply suggested by experience.

There is, in addition to the health that is absorbed from the open air, valuable instruction to be had from primeval nature. Camp life induces self-reliance and resourcefulness. Lessons of self-help are taught that may never be gleaned from the servant-aided, mother-guarded life at home.

After all, what is more fascinating to the average boy than an investigation of the wonderful storehouse of nature at first hand? Strolls through the forest, close observations of bird, animal and plant life, teach him far more of hidden knowledge in a few weeks than he could learn by poring over text books in a year. In addition, the playful side of his nature is compensated by a variety of land and water sports, while the necessary care of the camp and the preparation of meals make him more familiar with the phases of domestic economy, that every boy should encounter, than he would probably ever learn otherwise.

When established on the co-operative basis—the boys composing the camp sharing equally in expenses and responsibilities—the cost of the vacation outing will be slight, and the benefits manifold for the boys thus sent out to gain health and experience while shifting



Temporary Shelter Under an A-Tent

for themselves in the woods. After six delighted boys were well established in the woods on a Pennsylvania mountain slope last summer, the mother of one was filled with anxiety. She feared that her petted son was suffering from lack of home comforts. So she paid an unexpected visit to the camp.

So surprised and delighted was she upon witnessing the ingenuity and resourcefulness displayed not only by her own boy, but by the entire six, that she returned and reported to the other anxious mothers:

"There is not the slightest occasion for apprehension; all are well and happy, and are learning more during their few weeks of vacation than they will during the same number of months at school."

The idea of going off to the woods entirely alone (for the idea of a secret chaperon should not be disclosed), purchasing supplies, taking care



Resting After the Day's Sports

of wardrobes and household utensils, doing all of their own cooking and housekeeping for an entire summer, appealed to the youngsters. The educational advantages appealed to the parents.

All of these boys were from homes that boasted capable servants and smooth-running domestic machinery, where they were not obliged to do much of anything for themselves. Their ability to cope with conditions when forced to do so was shown, first of all, in the selection of cooking utensils and supplies, the establishment of the camp and the invention of numerous novel makeshifts for comfort and convenience. In fact, the ingenuity displayed by them proved a constant source of surprise to occasional visitors. There was a neatness of details that reflected more than passing credit. Bedding and clothing were aired every day, demonstrating that the boys had unconsciously absorbed ideas of neatness, and convenient systematizing of home duties, and had applied rules of good housekeeping that would undoubtedly have pleased their mothers.

A photographer who heard of this camp penetrated to its fastnesses. The boys had not been posted regarding his

fishing or gunning excursions called the boys away. In the opposite corner of the tent a box was arranged as a tool chest and work table when opened, for the boy who was fond of whittling and contriving home comforts. A little dog proved valuable as a protection to the camp.

To every boy a share of the routine work was appointed, from paring potatoes to the airing of blankets and keeping the sporting paraphernalia in order. Moreover, not one of them thought of shirking.

Even the culinary department was artistic. Nails had been driven into a



A Tree Cupboard

tree, upon which the various cooking utensils were hung, thus forming a convenient and spacious cupboard. Long lines, stretched from tree to tree were hung with the woolen blankets, absorbing piny fragrance and sweetening sun and breeze for another night's healthful sleep.

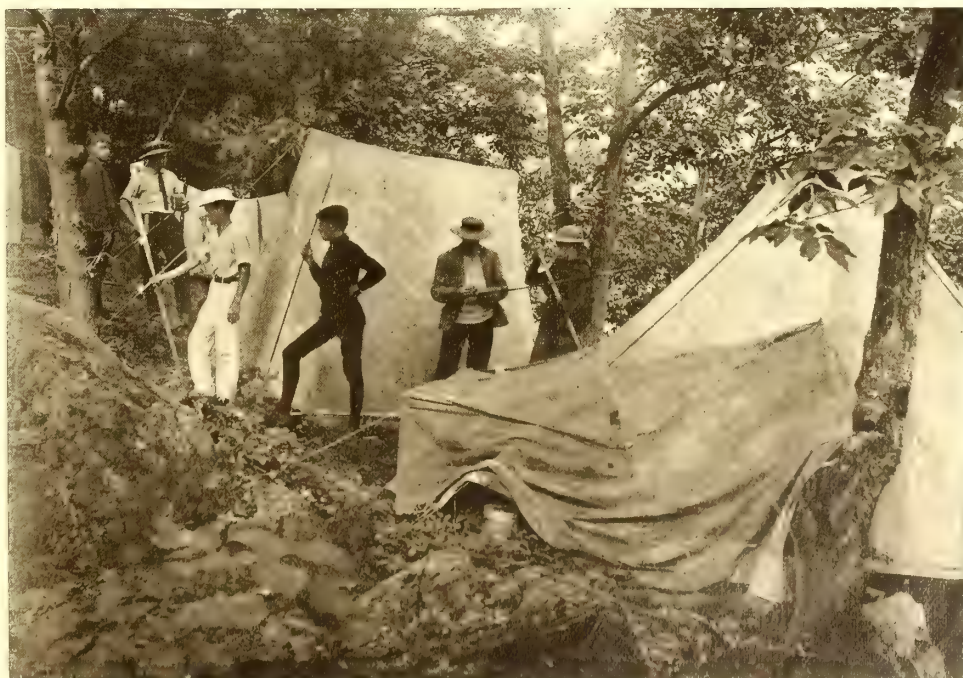
One of the most ingenious contrivances was the arrangement for cooking. Two big rocks, with a loose rock between them, had been discovered near the lower tent. The earth was dug away, presenting a generous cavity for a fire, and for roasting potatoes and ear corn. Ledges had been chipped in the rocks to support an oven grate, sufficiently large for three or four cooking utensils. Here the coffee pot, the frying pan and kettles for two vegetables could



Breakfast Is Cooked on a Fire Built in an Opening Between Rocks

coming; nevertheless, they were able to make a most creditable showing. The pictures taken are among those presented with this article, and they demonstrate, better than any argument, the fact that the average American boy is amply able to take care of himself. They also show how good a school of instruction the summer camp really is.

The photographer found the six boys clustered around the camp fire. Good-natured rivalry prevailed in preparing, to best advantage, their favorite dishes. The tents and their surroundings displayed experience in things other than cooking. Heavy, roughly barked tent poles were neatly hung with clothing, where it would have the advantages of sun and breeze, and where, at a moment's notice, it could be quickly protected from the rain. In the "reading corner" of the largest tent a trunk was so arranged that it made an ideal bookcase when opened, but could be closed and locked without disturbing the books, when



Making Ready for the Fishing Trip



The Indian Canoe Fitted with Lateen Sail and Lee Boards

heat at one time. Fifteen minutes in the hot ashes brought the corn to the feast, after the first course of meat and vegetables—and such tempting corn as it proved to be!

A bag of potatoes, a basket of tomatoes and apples, a ham, from which smooth slices were neatly cut; a covered bread box, and well-kept shelves of other supplies, displayed intelligence in making purchases as well as care in keeping them.

Brought near to nature's heart, not only did the boys learn to take care of themselves, but they absorbed more than a little information from their surroundings. No better opportunity could have been afforded for botanical and geological research and general study of nature. The boys were quick to see the advantages, spending many hours in careful investigation among the wild flowers and plants and the rocks. Moreover, books were by no means neglected, a portion of each day being spent with them.

For a number of years "camping schools" have been in vogue. They may be found in the mountains and along the lake and river shores from Pennsylvania to Maine. Some of the more ambitious and costly of these expeditions wind up with coaching trips through the hills, and with visits to various points of interest. Many such outings continue for as long as eight weeks, or even throughout the entire vacation season. A more or less extensive system of tutoring goes on in most of the camps. Last summer there was a large camp under experienced chaperons, on the shores of a mountain lake in the North, where regular instruction was carried on. Such outings, however, involve considerable expense upon the parents. Then, too, the camps are more or less under discipline, from which, above all else, the boys desire to escape during vacation time. A "regular boys' camp," like the one described, is not only less expensive, but decidedly more enjoyable in every way, and

doubtless of more lasting profit to the boy. The lack of tutoring is more than compensated by what the boys acquire in varied and practical knowledge while assuming the many responsibilities included in the details of camp life.

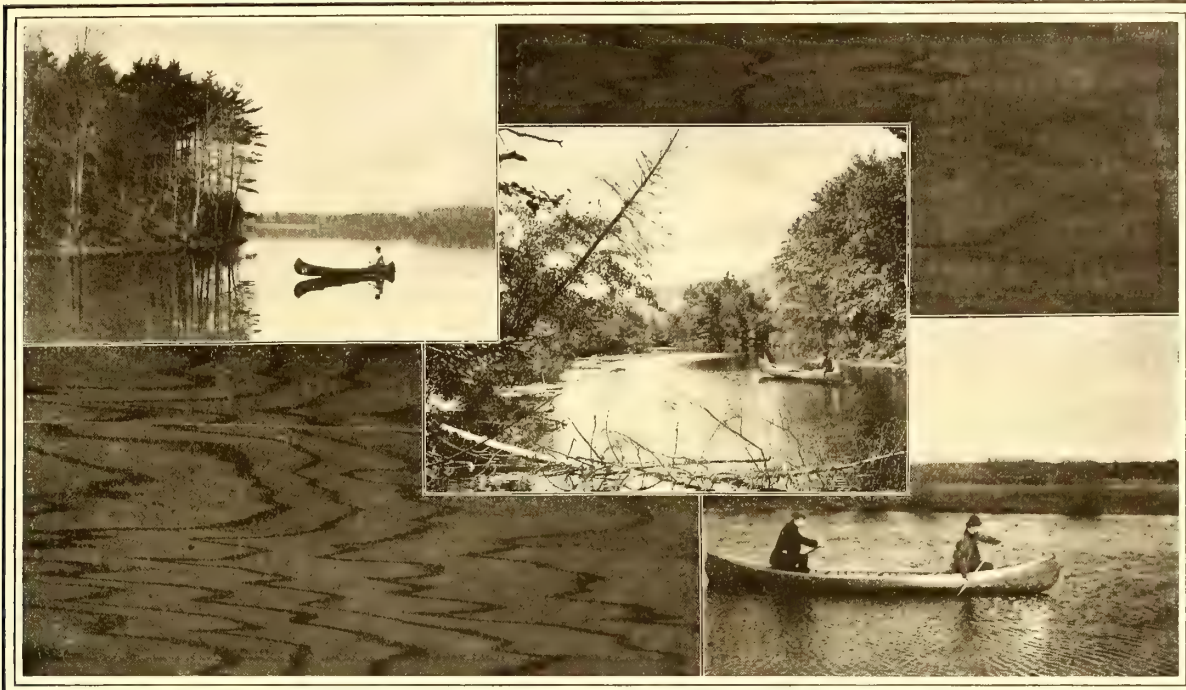
The cost of camp life for six boys, on the co-operative plan, will vary according to the situation. When the tents and furnishings are owned by the boys, this will prove the greatest item of expense; and this will not be large when the boys join in and purchase everything in quantities. Good roomy tents may be bought at prices ranging from five to fifteen dollars; and the small "A" tents for sheltering supplies, or for individual camping, may be had sometimes for less than five dol-

lars. With the light portable canvas cot beds, no mattresses will be required. Some of our boys preferred a hammock for sleeping, but the cot beds which average about the same in price—from one dollar up—are more comfortable, and do not add greatly to the baggage. The plan of sleeping on the ground rolled in blankets, or on beds of straw or pine needles or other much-lauded camp-bed material, sounds in the telling much better than it feels in the testing, and while satisfactory for a few nights of camp life, is seldom desirable for a good long vacation camp. Comfortable camp beds that are raised above the damp ground in times of storm are well worth the extra expense in the end.

After choosing the tents and the cots, each boy secured the extra furnishings from the home supply; the mothers deciding upon the amount of necessary bedding, etc., and after each had selected a supply of dishes the plates, cups, saucers, etc. (all being in the light, durable agate ware), each supplied his share toward the pots, pans and kettles for camp cookery. This supply included one big iron frying pan for cooking generous supplies of the fresh fish caught by the campers, one small frying pan for the ham, bacon and potatoes, an agate pot large enough for rabbit and chicken stews, and three agate pans for vegetables. A steamer was selected to fit closely within the top of the stewing pot, and



A Wall Tent Set Up In the Woods



Exploring the River In the Indian Canoe

in this it was possible to steam the potatoes in their jackets while the meat was boiling in the pot beneath. These, with the kettles and coffee pot, completed the supply of utensils, which filled every emergency without being expensive or bulky for transportation.

After the rent of the camp site and the furnishings have been decided upon, the food supply is the only extra expense. By the way, the camp site can frequently be secured rent free if some responsible person—preferably the father of one of the boys—holds himself liable for any damage that may be done by the boys. The profit to be derived by the farmer or the owner of the woodland in furnishing supplies of vegetables, eggs, butter, milk, etc., is frequently considered sufficient recompense for camp site rental, and it should be clearly designated at the start as to what underbrush or what certain tree or trees may be used by the boys for firewood.

It should be remembered that a good ax is an indispensable implement in a camp, not only during the first few days, when there are a hundred uses for it, in erecting ridge-poles, driving tent-pegs, etc., but in chopping the daily firewood, and in supplying numerous camp comforts.

After a few sugges-



Waiting for a Bite

the fish—fish that had been quickly cleaned by some of the boys while the fire was started by the others. A generous quantity of potatoes was prepared, and all was ready.



Paddling the Corsair Down Stream

tions from one of the practical mothers, the boys soon mastered the art of rapid camp fire cooking. They learned that, although the rabbits secured on gunning expeditions and the one chicken dinner each week—supplied by a near-by farmer—made tempting feasts, they were troublesome to prepare, because of the long cooking required and the difficulty in “tending camp fire” throughout the stewing process. They learned that many of the most appetizing dishes could be prepared during the first hot glow of the camp fire; and on coming home from a long tramp in the

woods or a gunning or fishing expedition, the food was preferred that could be prepared in a few moments to satisfy ravenous appetites. With ham, bacon and eggs, and a quantity of white potatoes and tomatoes always on hand, the art of quick preparation was soon mastered. When fresh fish were brought home from the morning's outing, the big frying pan was placed on the rack over the camp fire as soon as the wood was lighted; in this thin slices of bacon were placed, and when smoking hot in went

Three Inexpensive Log Bungalows

By Joseph Darlington



ABUNGALOW built at Deal, N. J., which imitates the Mexican hut, is unique in every particular owing to the fact that it was constructed with the refuse left from the erection of sixteen other cottages which had been previously built. This fact is of peculiar interest in showing what can be done with odd bits of materials. The exterior is covered with logs, which retain their bark. The frame was sheathed and then covered with two thicknesses of building paper and painted before the logs were put in position. The gables are plastered, and stuccoed with brick. The entrance is through a Dutch door into a living-room, which has French windows opening onto the porches, which are on either side of the room. The ceiling takes in the full height of the building. The walls, to the height of seven feet, are wainscoted with matched boards stained a dark brown, soft in tone, while the trimmings are painted a soft cream. The whole is finished with a molded shelf cap. The rafters are exposed to view, and are stained a dull greenish color, which gives a sky effect at night when the lower part is lighted up. The fireplace runs right up through the room, and is built of brick, with hearth of similar material. There are two bedrooms and a bathroom on this floor, the latter having porcelain fixtures and exposed nickelplated plumbing. The second story is reached from living-room and from the outside. It contains the man's quarters and kitchen completely furnished.

This bungalow was designed by Mr. William G. Massarene, of New York, who has the happy faculty of creating



A Bungalow Built for Mr. William G. Massarene for Six Hundred Dollars

and producing the most novel and attractive designs for bungalows of this character in a very short space of time. Mr. Massarene was also the architect of the bungalow erected on the Ross and Fenton Farm, at Deal, N. J., and illustrated on page 255. It contains a living-room, which answers as hall, living and dining-room. There are two sleeping-rooms on the same floor, with a low second story, which spreads the building out, and permits of its being kept low and quaint. The construction is simple and cheap. There is a brick wall under the outside walls and under the center partition. A six-foot cellar is provided under the rear portion, which contains wash tubs and furnace.



An Open Fireplace Adds Interest to the Interior



The Plan Is Most Unique

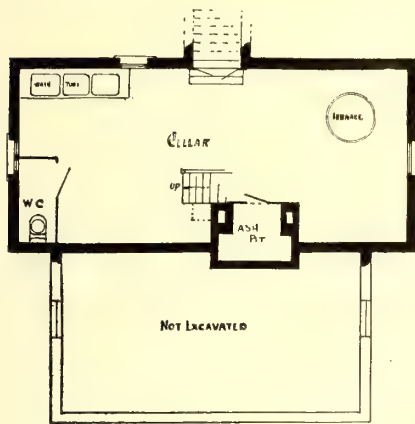
The floor beams rest on a brick underpinning. Above this the logs are hewn on one side, and they are piled up without any regard to the taper of the logs—held in place by notching at corners and spiking to two-inch plank frames at the openings. Branches are nailed in the spaces between and chinked up from inside with cement mortar, the branches preventing mortar from dropping outside. The logs are built up to the under side of the sill which receives



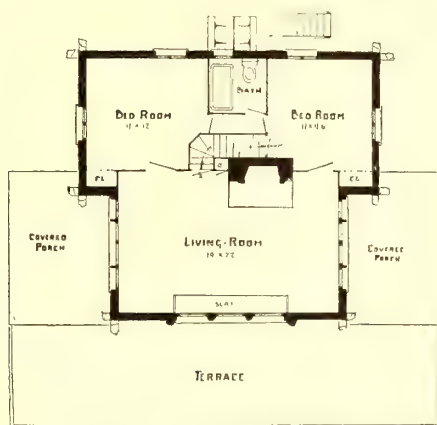
A Bungalow Built on the Ross and Fenton Farm for Eight Hundred Dollars

second floor beams, over the bedrooms and rafters. The frame of the second story is built flush on the inside and is

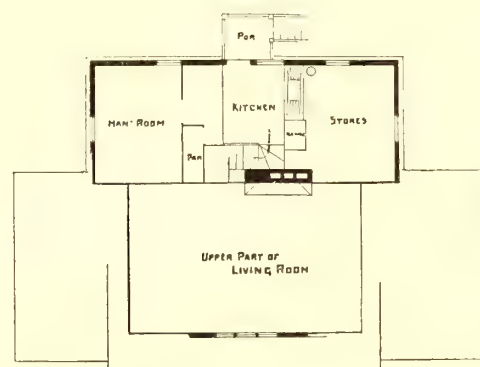
faces are covered with wainscoting, in cypress, which is stained a dark umber; the spaces above the wainscot-



CELLAR PLAN



FIRST FLOOR



SECOND FLOOR

sheathed with hemlock to the rafters, which are allowed to show. The roof is lathed with shingle lath, and the whole is covered with cypress shingles. The following are a few sizes and kinds of the lumber used: Log beams, 2 x 8 in.; rafters, 2 x 6 in.; studs, 2 x 4 in.; boards, 1 x 6 in.; sills, 2 x 10 in.; flooring, first floor, $\frac{7}{8}$ x 2 $\frac{1}{2}$ in., North Carolina pine, oiled, sash in small panes—clear glass; shingles, cypress; porch floor, 1 x 6 in. hemlock trim; where necessary, hemlock boards, using branches or heavy vines for back mold. The main feature is the log living-room, with a five-foot fireplace large enough to admit cordwood,

ing are covered with muslin and kalsomined a dead white, giving the effect of plaster. Tints can be used with harmonious results. The ceiling is tinted an ultramarine blue. The casings are painted ivory white. The fireplace is built of black headers with firebrick and hearth; a small low shelf of varnished hewn timber is provided. All interior partitions are double thick, and have felt paper between to deaden sound and prevent seams from opening. The walls of the bedrooms are ceiled up and stained a light green. The ceilings are treated with a light yellow cold-water paint. The trim at the door and windows is painted



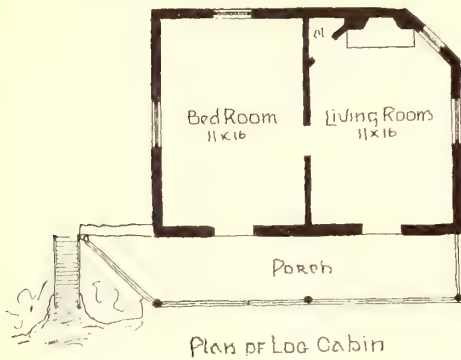
The Fireplace Built of Old Klinker Brick Is Effective



The Sideboard with Its Birch Stick Supports Is Unique

ivory white. The two bedrooms have closets and corner wash basins of enameled iron. Between them is the bathroom, which has a tiled floor and painted enamel walls.

The first story has a single floor, and the second a double



floor, smoothed, the under floor side turned down, upper turned up; between both is a layer of tar felt to prevent anything leaking through from kitchen, and to deaden sound. A winding stairway from the living-room, or an outside stairway, leads to the kitchen in the second story, which is provided with coal and wood stove, for hot water, iron sink, with drip board, ice box, dish and store closets. The servants' room is partitioned off. The walls, ceilings and partitions on this floor are stained with vermin-proof stain. The furniture for the bungalow consists of soft grain ash pinned together with hewn surfaces and dead finish. The decorative articles consist of native wares and rugs, ornaments of Zuni pottery, Moquaive basketware, Indian relics, pine bows, fishing nets for photographs, draped over fishing rods, cork buoys, and red and green yacht lights for cozy corners. For wall decorations are elk head, guns, sombrero, lasso, Indian beaded vest and feathered head dress, and pipes, as well as poster pictures.

"Cliff Eyrie" is a log bungalow built for J. D. Sawyer, Esq., at Greenwich, Conn. It is a log cabin, and is a real eyrie, on a real overhanging cliff about thirty feet above the



"Cliff Eyrie"—A Log Cabin at Greenwich, Connecticut

water. It was a house designed for this particular site, and is built of log slabs for the exterior walls, fastened to upright stud construction. A veranda is built across the front, from which steps lead to a miniature wharf and spring board for diving; from this veranda one can get quite satisfactory fishing during the season.

The interior is treated in a simple manner; the timbers are exposed to view, and effective results are obtained through the use of stains. The living-room, where both the cooking and dining is done, has a large open fireplace built of cobblestone picked up from the shore. The bedroom is provided with folding screens and can be divided into two rooms when desired. The cost of the house was \$500. For houses of this character the location is ideal, perched as it is on a high cliff, and embowered by large, over-topping trees, with the waters of the Sound beating against its foundations. Truly a charmingly situated house built at small cost.





OF ALL the towns in Connecticut there is none more beautiful nor containing more historical objects of general interest than Farmington. It is delightfully situated on the side of a hill, with mountain peaks towering to the east, while to the west it falls gracefully to the meadows, beyond which is the Farmington River making its great bend and flowing toward Avon to join the Connecticut. It is this accidental combination of river and mountain landscape that makes Farmington so picturesque and beautiful.

The place was first known as Tunxis Sepus, signifying a crooked river, and it was named after a tribe of Tunxis Indians which inhabited, not only what is now known as Farmington, but also its surrounding meadows and forests.

It was in the winter of 1639, when the town of Hartford had been founded three and one-half years, that its inhabitants began to think their broad meadows were too limited, and together with the towns of Windsor and Wethersfield applied to the General Court for some enlargement of accommodation. A committee was appointed to view the valley of the Tunxis and report to the

General Court on the 20th of February. Owing to the wintry weather, the investigation was not taken up till the 15th of June, and during the interim Captain John Mason, who had recently rid the colony of six hundred Pequots, was added to the committee, which concluded the conditions for the planting of Tunxis. In 1645 the village of Tunxis Sepus became, by legislative enactment, the town of Farmington.

The settlers found the natural features of the place much the same as we see them to-day. The main street, extending

from one end of the town to the other, with its houses built by the settlers on what was termed, in the time of the colonists, town lots, is typical of all the New England villages. The farm and pasture lands were separate allotments to the settlers, and they extended up the mountain side toward the east and to the river on the west.

Along the main street houses began to rise, log huts at first, each provided, as required by law, with a ladder reaching to the ridge for the purpose of permitting the chimney viewers to examine the chimneys of each house every six months. These log huts, however, subsequently gave way to more substantial and pretentious houses.

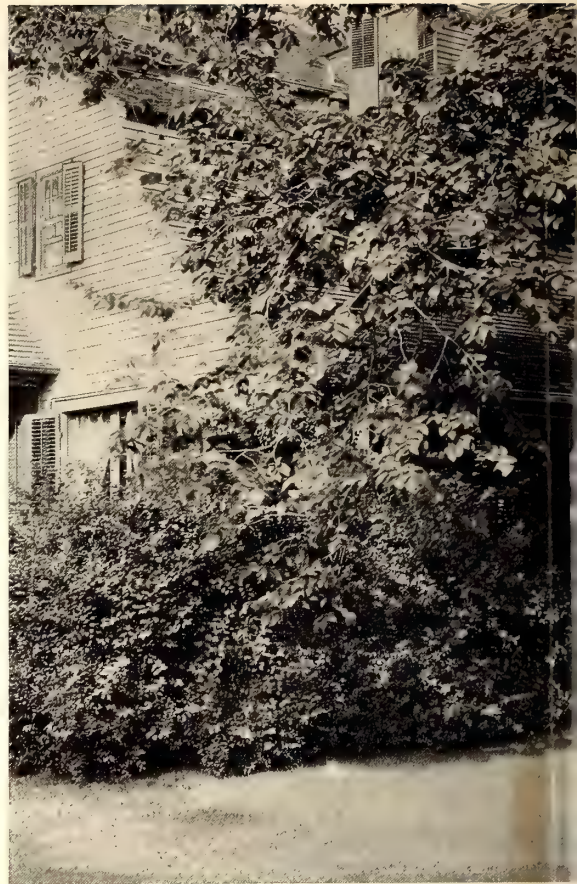
It was fortunate that the early citizens of Farmington were able, energetic



The Entrance to "Old Gate," the Summer Home of Rear-Admiral William Sheffield Cowles



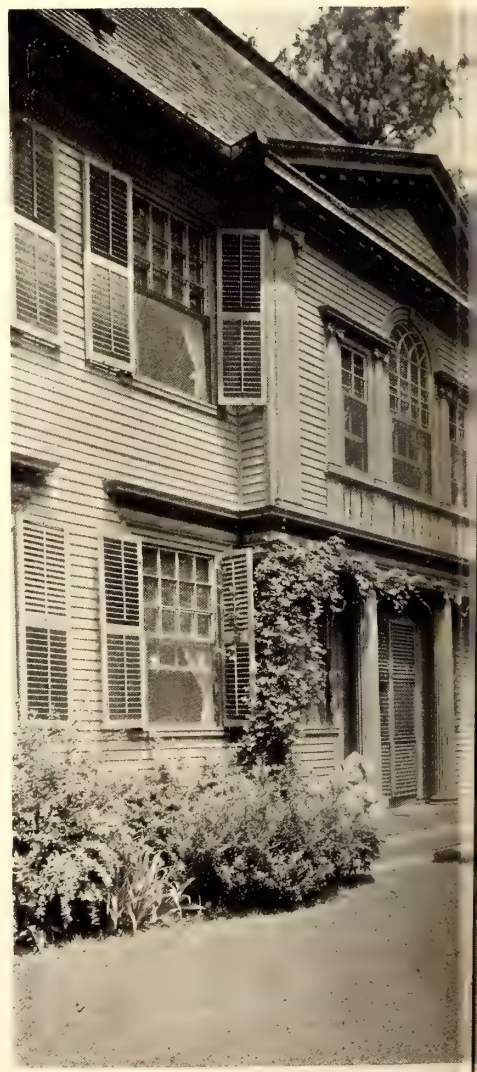
The Georgian Trim and Exquisite Mantel Lend an Air of Simplicity to the Drawing-room



On the Porch the Family Life Centers. This I



A View of the Mansion Showing the Old Gate and the Front of the House



The Façade of the Mansion Is Imp

"Old Gate," One of the Most Interesting
The Original House



ion of the House Was Built in 1660



A Fine Old Virginia Table and Sheraton Chairs Harmonize Admirably with the Classic Dining-room



sive with Its Classic Columns



From the Rear Porch of "Old Gate" a View of the Winding River May Be Seen

Houses in Farmington, Built in 1780

as Built in 1660



The Georgian Trim and Exquisite Mantel Lend an Air of Simplicity to the Drawing-room



On the Porch the Family Life Centers. This Portion of the House Was Built in 1660



A Fine Old Virginia Table and Sheraton Chairs Harmonize Admirably with the Classic Dining-room



A View of the Mansion Showing the Old Gate and the Front of the House



The Façade of the Mansion Is Impressive with Its Classic Columns



From the Rear Porch of "Old Gate" a View of the Winding River May Be Seen

"Old Gate," One of the Most Interesting Houses in Farmington, Built in 1780

The Original House Was Built in 1660

and resourceful men—men appreciative of the higher refinements of life, as evidenced by the high grade and class of the houses and farm buildings which they built. Many of the houses on Main Street, erected before the War of the Revolution, stand to-day as the most spacious, comfortable and tasteful dwellings to be found in any of the Connecticut villages. Into some of these houses water was conducted from an early period by a primitive and most ingenious system, known as the "Yellow Pine Log Pipe Lines." The early settlers were mostly members of the representative families of other colonies, having come from their landing in Boston with numerous companies of migrators who formed settlements throughout Connecticut. They were all farmers, and the largest one of

all was the pastor of the flock, to whom was allotted a double portion of land. After they had thoroughly established themselves they turned their attention to the intellectual and industrial side of life. Schools were built, a general store was opened, saw and grist mills were established, and tanning yards, blacksmiths' shops and weaving looms were set up. The people universally had "genteel" manners and customs, and everyone went to church, except "Seth" North, who did not take kindly to Puritan ways and never went to church, and the children, as well as their elders, were pleased to call him "Mr. Sinner." However, Mr. North was quite in advance of the times, for when he was drawing near to his end he directed that his body should be cremated, selecting



The Morning-room Has a Fine Old Fireplace, and a Pleasant Outlook Into the Garden



The Original Kitchen, Dating from 1660, Has Been Transformed Into a Library. The Old Chimney Is very Interesting and Is Provided with a Bake Oven and an Old Crane

a lonely spot on the mountain, between two rocks, and his friend, Adam Stewart, as the chief cremator. The civil authorities, however, interposed and insisted upon giving him what they deemed a Christian burial.

Farmington has always had its aristocracy. Its men have been representative both in literary and ecclesiastical circles, as well as in the social and political life of the State. She gave to us the distinguished Governor Treadwell, the eminent patriot, scholar and Christian, and of whom an account of his public services must be a history of the common school system of Connecticut, of the rise of foreign missions and of much of the political history of the State in the days of the Revolution; the Rev. Noah Porter, D.D., whose pastorate of the First Church of Christ continued for sixty years;

who served under the personal orders of General Washington and who yielded his life to the cause of independence; the Hon. Timothy Pitkin, Moderator of the General Association, Trustee of Dartmouth College and Fellow of Yale College; and Deacon Edmond Hooker, who kept the "Old Red College," which not only counted among its students young men of the town, but Southern young gentlemen, who came to Farmington to be fitted for college.

The largest and most prominent family, from its earliest settlers to the present time, is the Cowles family, whose representatives have been leading figures in all of its forms of society, for they have always been the wealthiest and most influential people of the place. Colonel George Cowles, who subsequently became a brigadier and then a major gen-



The Most Stately Mansion in Farmington Has an Imposing Façade of Roman Character, and Is the Residence of James Lewis Cowles, Esq.

the Rev. Noah Porter, D.D., LL.D., his son, who became President of Yale University, and whose fame is known wherever education and civilization extend; and Miss Sarah Porter, who established, in 1844, a school which subsequently became the most celebrated school for girls in America. Much as Miss Porter loved her school and devoted her life to its welfare, she was none the less identified with the village of Farmington and co-operative and foremost in all its plans for improvement. She loved the village and, in testimony of her love for it, she gave the only park which Farmington now possesses. Miss Porter died in her eighty-seventh year, on February 17, 1900, and a testimony of the love and esteem with which she was held by her former pupils is best expressed in the beautiful parish house which they built in her honor, nearly opposite the house in which she lived. Farmington also gave us Colonel Fisher Gay,

eral, received the highest honor to be conferred by the militia of the State of Connecticut. His celebrated white horse, which he always kept ready to muster into service, testifies to the military character of the man.

While General Cowles was a shining light in the military life of the State, there were others of the Cowles family whose lavish entertainments and courteous hospitality won for them the love, esteem and admiration of all the people of the community. They had fine estates and stables, and with grand suppers and dinners maintained the dignity of their social reign.

General Cowles' house, which was the most dignified and stately mansion in Farmington, was frequently the scene of much gaiety, while its subsequent owner, James Cowles, the wealthiest man of his time, maintained with equal splendor the old house of his predecessor. James Lewis Cowles,



Many Handsome Pieces of Antique Furniture Are Placed
in the Morning-room



The Fireplace and the Old
of th



The Library Has a Fine Old Mantel. Its Colonial Furniture is
of Good Style



A Fine Old Mantel and M
Dra

Glimpses of the Interior of "Byde-



Warming-pan Are Characteristic
Colonial House



A Four Poster, Low Boy and a Queen Anne Mirror Carry Out the Colonial
Effect of the Guest-room



or Are the Chief Charms of the
ng-room



Furniture of Mahogany Completes the Furnishings of the Dining-room
Interior View of "Byde-a-Whyle"

-Whyle," an Old Farmington Mansion



Many Handsome Pieces of Antique Furniture Are Placed in the Morning-room



The Fireplace and the Old Brass Warming-pan Are Characteristic of the Colonial House



A Four Poster, Low Boy and a Queen Anne Mirror Carry Out the Colonial Effect of the Guest-room



The Library Has a Fine Old Mantel. Its Colonial Furniture is of Good Style



A Fine Old Mantel and Mirror Are the Chief Charms of the Drawing-room



Furniture of Mahogany Completes the Furnishings of the Dining-room
Interior View of "Byde-a-Whyle"

Glimpses of the Interior of "Byde-a-Whyle," an Old Farmington Mansion

founder of the Postal Progress League of America, is now the owner of this delightful old house, having inherited it from his father.

It was built in 1808, and is constructed of brick. It is a grand old house, and is by far the most dignified and stately mansion in Farmington, with an imposing facade, of Roman character, facing toward the south.

In the interior is a great hall containing a mahogany staircase of quaint design with a graceful triple window on its landing. Fine old mahogany doors, with fluted casings and pediments, open into other rooms of ample size. The drawing-room has a fine old fireplace with a handsome Colonial mantel carved with exquisite delicacy. The library and dining-room, beyond the drawing-room, are furnished in a similar manner, and are dignified and stately. Of old-time charm there is abundance in this fine old house, a charm beginning with its first upbuilding, and which is quite inseparable from it.

Rear-Admiral William Sheffield Cowles is also a distinguished member of this family, and with his wife, Mrs. Cowles, a sister of President Roosevelt, now maintains the most notable house in Farmington. It is called "Old Gate," and in summer is the scene of much festivity. Among its distinguished guests are numbered many members of the Diplomatic service, as well as others prominent in the naval and social life of the country. "Old Gate" is a charming place, and the old gate, from which it gets its name, is located at the entrance to the estate. It is classic in style, and is the most beautiful piece of architecture in Farmington. After crossing the threshold, a short walk brings one to the entrance, which is also classic in design.

The hall is a central one, extending through the house in the manner of the old Colonial mansions.

The interior is most interesting—paneled wainscoting, a massive wooden cornice, the fine old doors and trim, and the grand old Georgian mantel and overmantel, very ably express the excellent taste of its builder.

The hall has a fine old mahogany staircase. To the left of the entrance is the drawing-room, furnished mostly with antique furniture; and corresponding to the drawing-room is the dining-room, containing a fine old Virginia dining-table and Sheraton chairs. Back of the drawing-room is the morning-room, which was formerly the dining-room. This has an attractive old fireplace and mantel, and affords a pleasant outlook into the garden. It also forms the entrance to the living-room, which was formerly the kitchen, and now the most important and interesting room in the house.

In Colonial times an old house was seldom pulled down, but passed through a sort of evolution like the one in the present case. It was moved to the rear and made into a kitchen for the newer structure, so that the house had equally as many styles of architecture as it had dates of erection. The living-room of the present house was formerly the lower story of the original house built in 1660. It subsequently

became the kitchen to the newer house, built in front of it about 1780, for Zenas Cowles, whose residence it was for many years. At the death of Zenas Cowles it became the property of Thomas Cowles, his youngest son, who married Elizabeth Sheffield, and at their death, Admiral Cowles became the owner. The style of architecture of this new house was much superior to all the houses of the village at the time of its erection, and is said to have been designed by an officer in Burgoyne's army, who was sent to Farmington as a prisoner of war.

In 1898 Admiral Cowles added another extension to the house in order to provide for service quarters. Mrs. Cowles subsequently transformed the old kitchen into a library, and in its transformation, the old rough brick fireplace, with its upright iron cranes, was retained in its original form, and is now the principal feature of the room. It is built in a curious manner of a mass of rock, placed at the back of the fireplace to send out the heat into the room, and to prevent its being drawn to the outer air through the chimney flue. Bookcases were built in along the walls, and

comfortable and homelike furniture was properly placed about the room, and the whole presents a delightful air that simply expresses the characteristic of good taste. The side porch, off the living-room, is a most attractive feature of the house, and here the family life centers on a warm day. Access is obtained from it to the grounds, which are hidden from the street by massive shrubbery. Passing over the grassed lawn, one finds his way to the rose garden, and thence to the river, with its picturesque and interesting boathouse.

It was in this house that President Roosevelt, on October 23, 1901, received the warden and burgesses of the town, who in a dignified address bid him welcome to Farmington. It was also here that, later in

the day, he received, with Admiral and Mrs. Cowles, the other guests who came to pay their respects.

"Byde-a-Whyle," the old house built in 1815 by Major Timothy Cowles, another distinguished member of this family, is now the residence of Waldo K. Chase. It is a fine old house, planned in the shape of a cross with porticos built on the front and on either side, and which are supported on graceful fluted columns with Ionic capitals.

When Mr. Chase purchased this old house he saw great possibilities for it, and, while its alterations have not been excessive, such changes as have been made are in keeping with its character. The alterations consisted in transforming the old kitchen and pantries into a dining-room and the building of an extension to contain the kitchen and servants' quarters. The old hall has a mahogany staircase and paneled walls to the ceilings. The paneled wainscoting of old Colonial style is the feature of the house. Mr. Chase is a collector of antique furniture, and he has the finest collection of furniture of the Colonial period in Farmington.

The drawing-room, with its fine old Chippendale chairs, and its fine old mirror over the mantel, the library with its



The Classic Porticos Are the Chief Charm of "Byde-a-Whyle"

Sleepy Hollow chairs and fine old claw-foot table handsomely carved, the morning-room with its splendid mirror, its old mahogany bookcase, grandfather's clock, and the ladder-back chairs, and the dining-room, with its fine mahogany furniture, all have a charm which is most delightful. This charm is further enhanced by the furnishings of the sleeping-rooms in the second floor. Each of the rooms is a gem in itself, but one of the guest rooms, shown in the illustration, is especially notable, with its four-poster, and its low-boy used for a dressing-table, over which is hung a Queen Anne mirror. The den is off the dining-room, and among its treasures, which Mr. Chase prizes very highly, is an old sign which, many years ago, hung over the door of a cobbler's shop, and on which is inscribed, with yellow-painted letters, each word being punctuated by a period, the following notice:

Terms. strictly. cash.
No. Kathleen. Mabbourneen.
Payments. It. may. be.
for. years. and. it.
may. be. forever.

Leaving Mr. Chase's house and walking toward the north, one passes the old Congregational Church, which is typical of many of the old village churches of New England. The spire is its crowning glory, not only for external beauty, but for its construction. This church was organized October 13, 1652, by seven of the foremost townsmen, who afterward were known as the "Seven Pillars of the Church." To show

the solemn nature of these men, a story is told of one of its deacons who kept a shop, Mr. Samuel Richards, a very godly man of Puritanic ways, who deemed it necessary, on account of his office, to appear grave and solemn, so much so that when a boy appeared at his shop one morning, he became frightened by the solemnity of the man, instead of asking for a pair of L-hinges, he demanded of the horrified deacon a pair of archangels. Mr. Richards was also the first postmaster in Farmington, and the "Connecticut Courant" records, on July 22, 1799, "A Post Office established at Farmington for public accommodation, Samuel Richards, P. M." The post office was kept in the front hall of his house, and the half dozen letters which some times accumulated were fastened on the wall with tape.

Beyond the church one passes many fine old houses, the most important of which is the one built by Gad Cowles, and now the residence of Henry N. Whittlesley. The old house is built of brick, and has a fine entrance and portico at the side. The chief charm of the house, however, is its beautiful mantels. The one in the front drawing-room is carved with exquisite delicacy and detail, and the beauty of this mantel was so much admired by the committee in charge of the erection of the Connecticut State Building for the World's Fair at Chicago that a replica of it was placed in the new structure.

According to Colonial law each town was obliged to keep a tavern or inn for the entertainment of travelers, and Joseph Root, of the village, was appointed by the town to attend to this duty. In 1691 an inn with a swinging sign offered entertainment for man and beast, and it subsequently became what is to-day the Elm Tree Inn, owned and conducted by

Concluded on page 280



"Byde-a-Whyle," the Summer Home of Waldo K. Chase, Esq., Originally Built for Major Timothy Cowles in 1815



The Entrance Porch to the House. An Old Iron Railing Flanks the Staircase



The Chief Charm of the Interior of the House Is Its Mantels, Carved with Exquisite Delicacy



The House Built for Gad Cowles Is Now the Summer Home of Henry N. Whittlesley, Esq.



House-Boating in America

By
ALBERT BRADLEE HUNT



AMERICANS have during recent years acquired a new regard for almost every branch of outdoor life, sport and recreation. House-boating has found many admirers in this country, and each year the ranks are augmented by hundreds of recruits; for perhaps nothing else combines so well the attractions of a recreation and the solution of the summer problem.

In increasing numbers families leave their city homes for the country or shore during the hot months of the year. But most of the desirable resorts within commuting distance of large centers are expensive; and the man of moderate means frequently is forced to send his family to some place a long distance from town, at a point so remote that he himself can not join his family except perhaps for an occasional week-end. This, of course, is a hardship for all concerned; but the children must be in the country. Yet there obstacles may be easily overcome; and if they did but know it, the solution is ready waiting for the puzzled ones to take advantage of. The house-boat solves the problem for those who enjoy life on the water, and there are few who do not. The house-boat can be built to fit almost any purse; and there are few cities which have not, within an hour by rail or boat,

a suitable lake or river or bay where a house-boat may be moored; the business man may go back and forth each day, and every night may be spent with his family. A mode of living is thus made possible that adds materially to the health and happiness of all.

The great majority of us are "hewers of wood and drawers of water," and it is to such that house-boating should have its strongest appeal. The leisure class have already given this recreation their stamp of approval.

There are many types of house-boats, but in this article I shall deal specifically with but one, the only true type, known variously as the stationary scow or immobile house-boat.

This type of boat has no means of propulsion; to move it from one place to another it is necessary to call into requisition a launch or tug. As a matter of fact, however, this is rather more of an advantage than otherwise; for in actual practice house-boats exhibit a tendency to remain in one place, when a location has been found that combines a good base for supplies, clean water, sheltered anchorage and convenience of access to town. Then, too, one eliminates from the boat the gasoline engine, which means a saving of room, no small factor in a boat of moderate size, and a saving of expense, for the house-boat propelled with a gasoline engine means a more expensively constructed hull to



A House-boat on the Indian River

begin with, and while the initial cost is greater all the way through, it is also far more expensive to maintain.

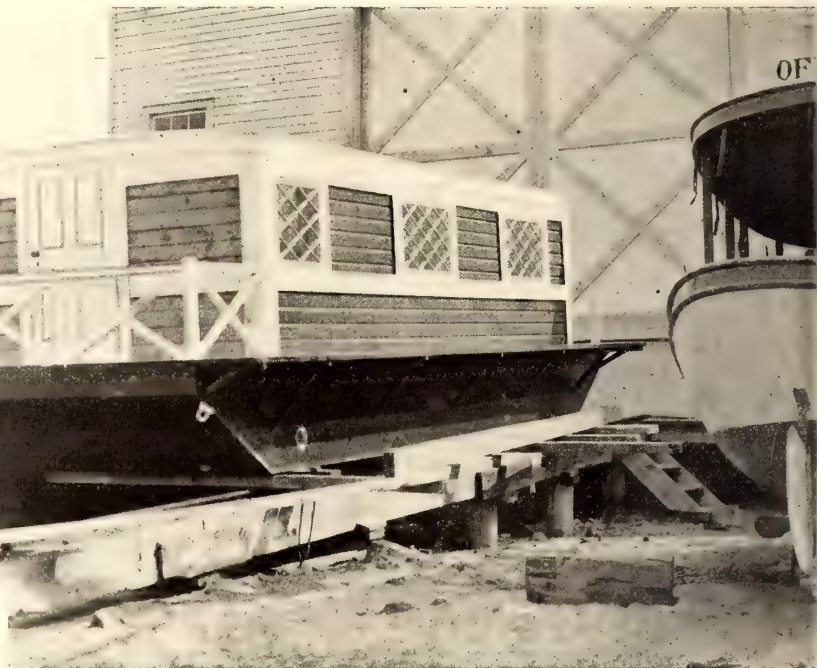
A small gasoline launch, which will serve for tender, express and market boat, will be found a great convenience and an almost indispensable adjunct to the house-boat. Aside from its great usefulness, it enables the owner, the family and guests, to make frequent excursions and to visit and explore all the nearby places. The advantages of the marine gasoline motor need not be extolled here, but suffice to say that these handy and simple little machines have now been brought to a very high point of perfection. The aim of nearly all manufacturers has been to make them "fool-

pose, unless, of course, one insists on having a maid. If the boat is large enough and the owner desires to keep a servant, a man will prove far more satisfactory. Chinese are by far the best; but few are to be had. Swedes and Norwegians come next, and they are invariably good boatmen; they fill the requirements very nicely. They are generally clean, and most of them can cook sufficiently well to prepare in a palatable way the simple fare one demands when living afloat.

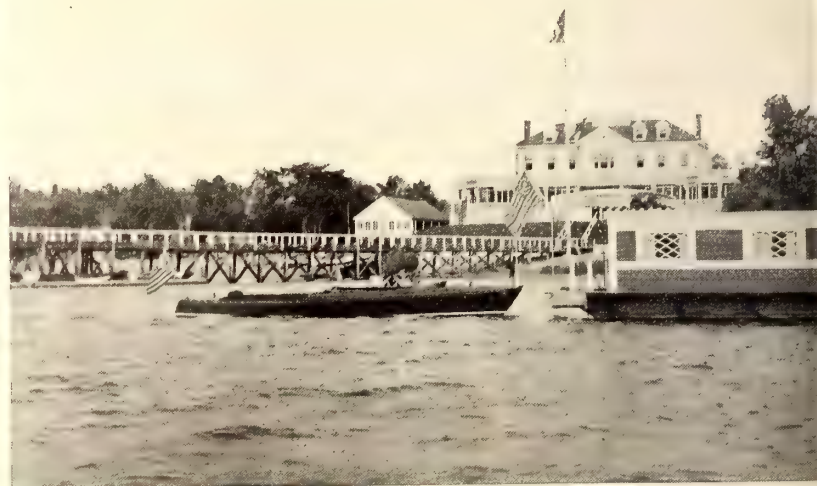
West Indian negroes have been tried by many with excellent results. Those bred in the British possessions make the best servants. Most of them can cook, and besides being reasonably clean, are usually good swimmers and watermen.



The Galley Is Conveniently Arranged for Cooking Purposes



The "Hostess" on the Railways Waiting for Her Dash into the Sea



The "Hostess" and Her Tender

proof," and anyone with ordinary intelligence can handle the motor with ease and safety.

Power tenders can be had at moderate figures, some good ones can be bought as low as \$150. The modified dory and sharpie make admirable launches, and have the great advantage of being most inexpensive. The cost of the engine itself is very much the same, no matter in what type of hull it may be installed.

A sailing dory makes a handy tender, for it can be easily propelled with either oars or sails. A canoe adds to the completeness of one's fleet; it is cheap, is easily paddled, and may be readily lifted out of the water and put on the upper deck out of the way.

The servant question is not as vexatious as one might sup-

pose, unless, of course, one insists on having a maid. If the boat is large enough and the owner desires to keep a servant, a man will prove far more satisfactory. Chinese are by far the best; but few are to be had. Swedes and Norwegians come next, and they are invariably good boatmen; they fill the requirements very nicely. They are generally clean, and most of them can cook sufficiently well to prepare in a palatable way the simple fare one demands when living afloat.

For the children one should, of course, select a servant who can swim and handle a boat well, for he can teach the young folks to swim and sail and row; and one may go to town in the morning with the satisfaction of knowing that the little ones are in good hands.

The cost of living on a house-boat should average a little less than it does in town. Meats will cost a little more, but under some conditions fish and shell fish may cost less. Gro-

ceries can be had for the same price one pays in town, while green vegetables, milk, cream, etc., should be cheap when they are to be had from farms adjacent to the anchorage.

To suggest anchorages and mooring places where house-boats may be best enjoyed would be an almost endless and futile task, for our country is a network of rivers and streams. Besides the numberless inland waters there are the coast lines with the indentations and bays, suitable for house-boat moorings.

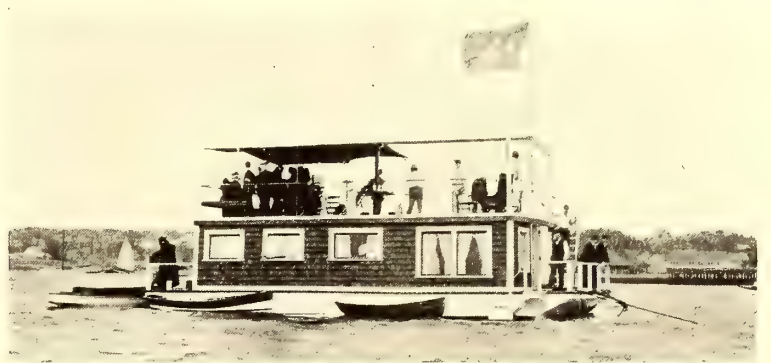
There are certain things to bear in mind when picking out an anchorage, wherever it may be. Be sure that it is perfectly sheltered from every quarter, anchor as near the shore

entirely new; that is, the scows were specially built to take the house, which insures a tight and clean hull. Taking an old scow or hull and building a house on it is a questionable operation, for the converted hulls are generally leaky and frequently are infested with vermin. The building of an entirely new boat may mean a greater outlay at first, but she will be far more satisfactory and in the long run the cost for repairs will be less.

"Hostess," the smallest of the quartet, was designed for his own use by Mr. Charles D. Mower, a well-known naval architect practicing in New York City. She was built at College Point, L. I., under the designer's supervision.



The Writing-table Is a Necessary Adjunct to Life on the Water



A Trim House-boat with a Serviceable Upper Deck



The Divan Provides Extra Sleeping Accomodation for a Guest

as you can, and still avoid mosquitoes and noises from shore resorts or other objectionable places. A mushroom anchor (shaped as its name indicates) and a chain cable are always good investments. If they are large enough they afford the best sort of insurance, and on stormy nights one need never sit up and worry and wonder if the boat is dragging.

To give a full and practical idea of the immobile house-boat, I have selected four craft, all of which are built within a short distance of New York City. These boats have been taken not alone because they are representative craft of their type, but because they were built where labor and material are higher than elsewhere in this country, and boats that can be built for the figures mentioned in this locality could be constructed for less money elsewhere. All four boats were

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begin with, and while the initial cost is greater all the way through, it is also far more expensive to maintain.

A small gasoline launch, which will serve for tender, express and market boat, will be found a great convenience and an almost indispensable adjunct to the house-boat. Aside from its great usefulness, it enables the owner, the family and guests, to make frequent excursions and to visit and explore all the nearby places. The advantages of the marine gasoline motor need not be extolled here, but suffice to say that these handy and simple little machines have now been brought to a very high point of perfection. The aim of nearly all manufacturers has been to make them "fool-

pose, unless, of course, one insists on having a maid. If the boat is large enough and the owner desires to keep a servant, a man will prove far more satisfactory. Chinese are by far the best; but few are to be had. Swedes and Norwegians come next, and they are invariably good boatmen; they fill the requirements very nicely. They are generally clean, and most of them can cook sufficiently well to prepare in a palatable way the simple fare one demands when living afloat.

West Indian negroes have been tried by many with excellent results. Those bred in the British possessions make the best servants. Most of them can cook, and besides being reasonably clean, are usually good swimmers and watermen.



The Galley Is Conveniently Arranged for Cooking Purposes

proof," and anyone with ordinary intelligence can handle the motor with ease and safety.

Power tenders can be had at moderate figures, some good ones can be bought as low as \$150. The modified dory and sharpie make admirable launches, and have the great advantage of being most inexpensive. The cost of the engine itself is very much the same, no matter in what type of hull it may be installed.

A sailing dory makes a handy tender, for it can be easily propelled with either oars or sails. A canoe adds to the completeness of one's fleet; it is cheap, is easily paddled, and may be readily lifted out of the water and put on the upper deck out of the way.

The servant question is not as vexatious as one might sup-

When one is fortunate enough to secure a good Jap he will prove to be all that could be desired. But in general the Japanese are hardly to be recommended, for they are constantly changing, and many are careless and dirty. The good ones command a high wage, and the poor ones are not wanted at any price.

For the children one should, of course, select a servant who can swim and handle a boat well, for he can teach the young folks to swim and sail and row; and one may go to town in the morning with the satisfaction of knowing that the little ones are in good hands.

The cost of living on a house-boat should average a little less than it does in town. Meats will cost a little more, but under some conditions fish and shell fish may cost less. Gro-



The "Hostess" on the Railways Waiting for Her Dash into the Sea



The "Hostess" and Her Tender

ceries can be had for the same price one pays in town, while green vegetables, milk, cream, etc., should be cheap when they are to be had from farms adjacent to the anchorage.

To suggest anchorages and mooring places where house-boats may be best enjoyed would be an almost endless and futile task, for our country is a network of rivers and streams. Besides the numberless inland waters there are the coast lines with the indentations and bays, suitable for house-boat moorings.

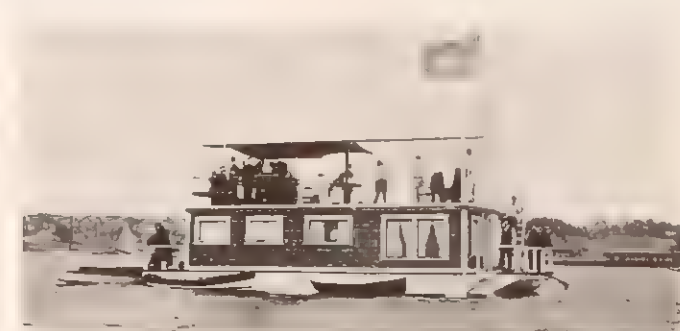
There are certain things to bear in mind when picking out an anchorage, wherever it may be. Be sure that it is perfectly sheltered from every quarter, anchor as near the shore

entirely new; that is, the scows were specially built to take the house, which insures a tight and clean hull. Taking an old scow or hull and building a house on it is a questionable operation, for the converted hulls are generally leaky and frequently are infested with vermin. The building of an entirely new boat may mean a greater outlay at first, but she will be far more satisfactory and in the long run the cost for repairs will be less.

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The Writing-table Is a Necessary Adjunct to Life on the Water



A Trim House-boat with a Serviceable Upper Deck



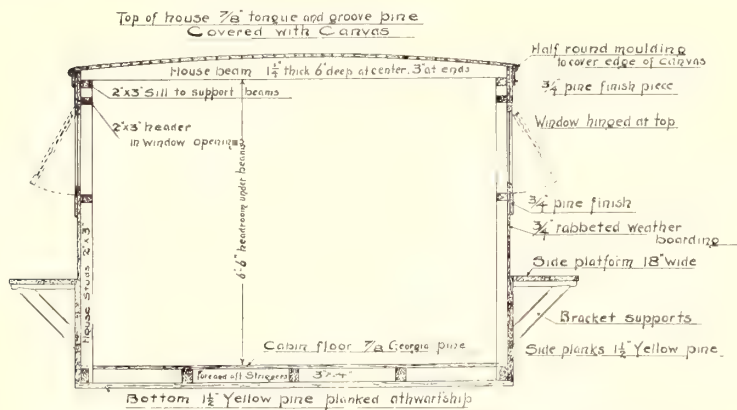
The Divan Provides Extra Sleeping Accomodation for a Guest

as you can, and still avoid mosquitoes and noises from shore resorts or other objectionable places. A mushroom anchor (shaped as its name indicates) and a chain cable are always good investments. If they are large enough they afford the best sort of insurance, and on stormy nights one need never sit up and worry and wonder if the boat is dragging.

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at the center, the highest point of the crown, they are six inches in depth. The cabin floor is laid on the bottom stringers, and there is six feet six inches head room under the deck beams. The windows, which have diamond panes, add materially to the general effect of the exterior and in-



The Transverse Section Shows the Simple Method of Construction

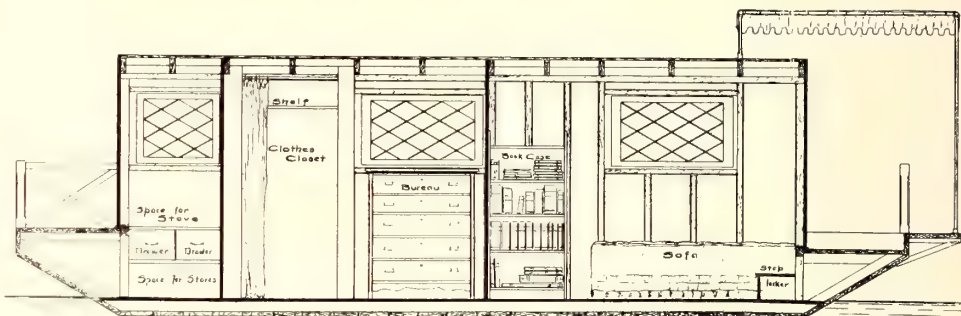
terior. They are hinged at the top to open out at the bottom. This is the best practice, as the windows can be left open during rainy weather, thus giving needed ventilation, and water seldom, if ever, finds its way inside.

The sides of the scow are painted black above the water-line and green below. The house is a deep red, which is relieved by the white on the window trim, sash, etc. The top of the cabin house and the deck are yellow. A Dutch door leads from the after deck (which is six inches lower than the top

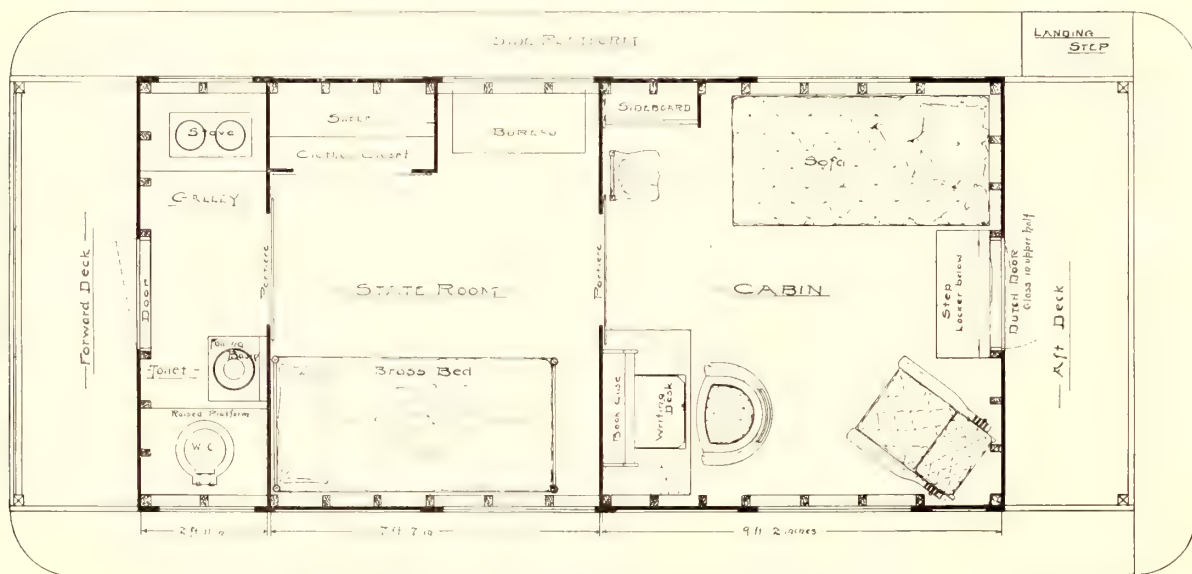
brown burlap is used. The furniture and decorations are shown in the photographs of the interior, and the construction of hull and house is indicated clearly on the carefully worked-out plans.

"Hostess" cost, complete, less than \$600, this figure including all interior fittings. The original contract was for \$294. Extras, including running board, rails, special sash and doors, and installing plumbing, ran the cost up about \$100. The interior fitting and mooring added about \$100 more. The mooring consists of a 350-pound Fair Haven mushroom anchor, with two lengths of 5-16 inch chain, which are shackled to a heavy swivel in the main chain, which is 3/8 inches in diameter, giving the boat a scope of about fifty feet. The ends of the bridle of the 5-16 inch chain are shackled to heavy wrought iron chain-plates on either side of the bow.

Among the many admirers of "Hostess" were two brothers, Messrs. A. H. and J. W. Lincoln, friends of Mr. Mower's, who also made their headquarters at Manhasset Bay, L. I., where Mr. Mower kept his boat. They say that Mr. Mower's experiment proved an entirely practical one,



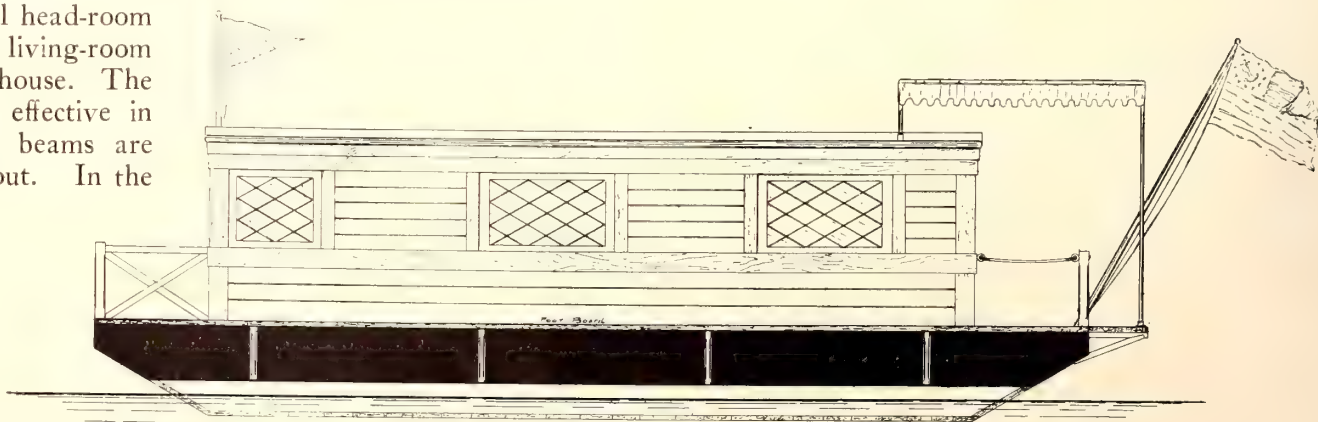
The Arrangement of Lockers, Galley and Fittings Are Shown in the Longitudinal Section



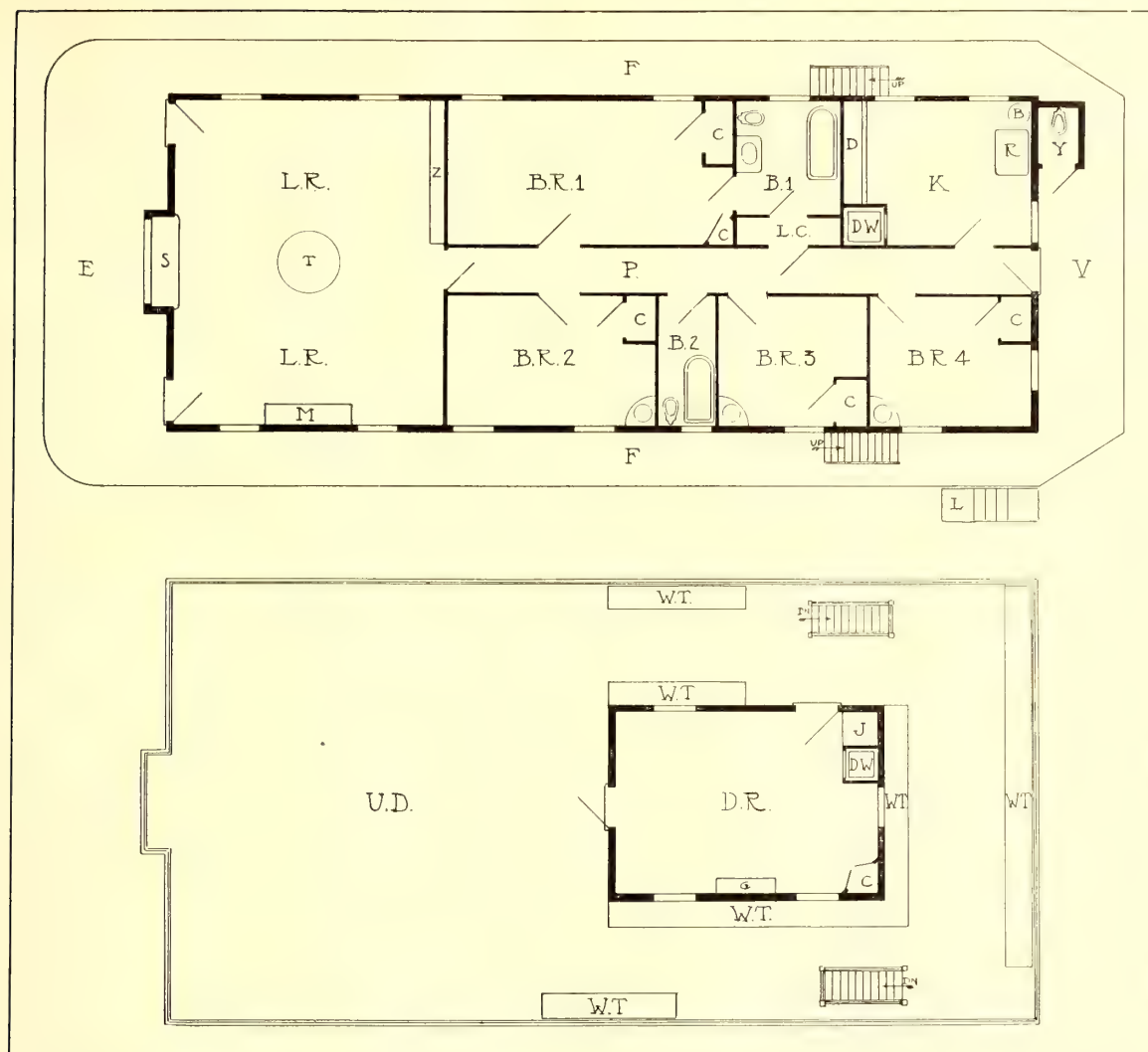
A Complete Arrangement of Rooms and Furniture

of the hull, to give full head-room in the doorway) to the living-room in the after end of the house. The interior is simple but effective in treatment. The deck beams are painted white throughout. In the living-room the studs are of a deep coach green, while in the stateroom a light brown is used. Olive green burlap covers the spaces between the studs in the living-room, and in the bedroom a

and, after two seasons, they decided to have built for themselves a similar boat, but one somewhat longer, to meet their requirements. The result was "Yankee," a boat four feet longer and two feet wider than "Hostess." The construction of the later boat was almost identical with that of her prototype, but the interior arrangement was somewhat different; the larger galley and separate lavatory on "Yankee" were features not possible in the smaller craft. "Yankee" cost a little over \$600 complete. During the



The "Hostess," Showing the Planking Below and Above the Water Line



"The Moorings"

Key to Plan of "The Moorings"

- D. R.—Dining-room, 17 ft. by 21 ft.
 L. R.—Living-room, 17 ft. 8 in. by 21 ft. 6 in.
 B. R. 1—Bedroom, 18 ft. 9 in. by 9 ft. 6 in.
 B. R. 2—Bedroom, 13 ft. 8 in. by 8 ft. 7 in.
 B. R. 3—Bedroom, 8 ft. 7 in. by 9 ft. 8 in.
 B. R. 4—Servants' bedroom, 8 ft. 7 in. by 10 ft. 6 in.
 B. 1—Bathroom, 7 ft. 6 in. by 6 ft. 10 in.
 B. 2—Bathroom, 8 ft. 7 in. by 4 ft.
 P.—Passage, 3 ft. wide.
 L. C.—Linen closet.
 D. W.—Dumb-waiter.
 D.—Dresser.
 B.—Boiler.
 R.—Range.
 C.—Closets.
 T.—Table.
 M.—Fireplace.
 Y.—Servants' toilet.
 V.—After deck.
 E.—Forward deck.
 F.—Gallery along sides.
 U. D.—Upper deck.
 G.—China closet.
 J.—Serving table.
 W. T.—Water tanks.
 L.—Gangway.

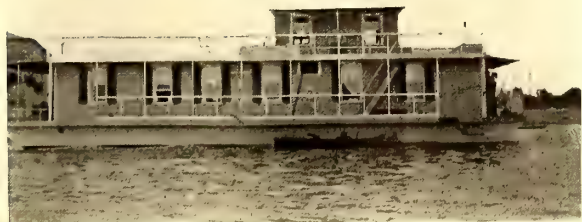
The hull is planked with 3 inch yellow pine, and is strengthened by longitudinal stringers. The house is sheathed inside and out. The outside is painted white and the inside is hard pine varnished. The interior arrangement was laid out by her original owner and Mr. Scudder has found it satisfactory in every respect. There are

summer months she is moored in very much the same way as "Hostess" is, and any visitor at Manhasset Bay will see the twins, for they look very much alike in the offing, riding quietly at their anchorages off the Manhasset Bay Yacht Club.

In the "New Netherlands" we have a larger and more expensive craft. She is owned by Mr. S. D. Scudder, a New York banker, who has resided on the boat with his family for several seasons, and the experience has been most delightful. "New Netherlands" first made her headquarters while under Mr. Scudder's ownership in Jamaica Bay, N. Y., but later was towed around to Gravesend Bay, and for the past two seasons has been moored there off the Atlantic Yacht Club. "New Netherlands" was built by a wealthy Brooklyn gentleman, and was put together in a rather extravagant way. The scow is forty feet long and twenty feet wide, and the boat complete is said to have cost over \$3500. This price is high; a boat of the size and type ought to be well built in the vicinity of New York for from \$1500 to \$1800.

four persons in Mr. Scudder's family, and one servant is always carried. We would criticise one thing in the plan, and that is the toilet-room opening directly from the main saloon or living-room. This is a distinctly bad feature. It is well, in working out plans of house-boats, to put the bath and toilet-rooms in the most out-of-the-way place possible and still have them accessible, a task easily within the possibilities of good planning and wise forethought.

One of the largest and the most pretentious house-boats built in this country is "The Moorings." She was constructed at City Island in Mr. Robert Jacob's shipyard from his own design. "The Moorings" was built during the slack season, and the best men in his employ did the work on her. She is very substantially built throughout. The hull is planked with 2½-inch yellow pine, diagonally braced athwart ship, as well as fore and aft. There are five keelsons and six athwartships, 8 x 8-inch yellow pine timbers, spiked, kneed and braced to the keelsons. The deck beams are 6 x 6-inch yellow pine, running the full width of the boat, extending



Side View of "The Moorings"



"Wa-Ta-Wah"



Bow View of "The Moorings"



Side View of "Yankee"



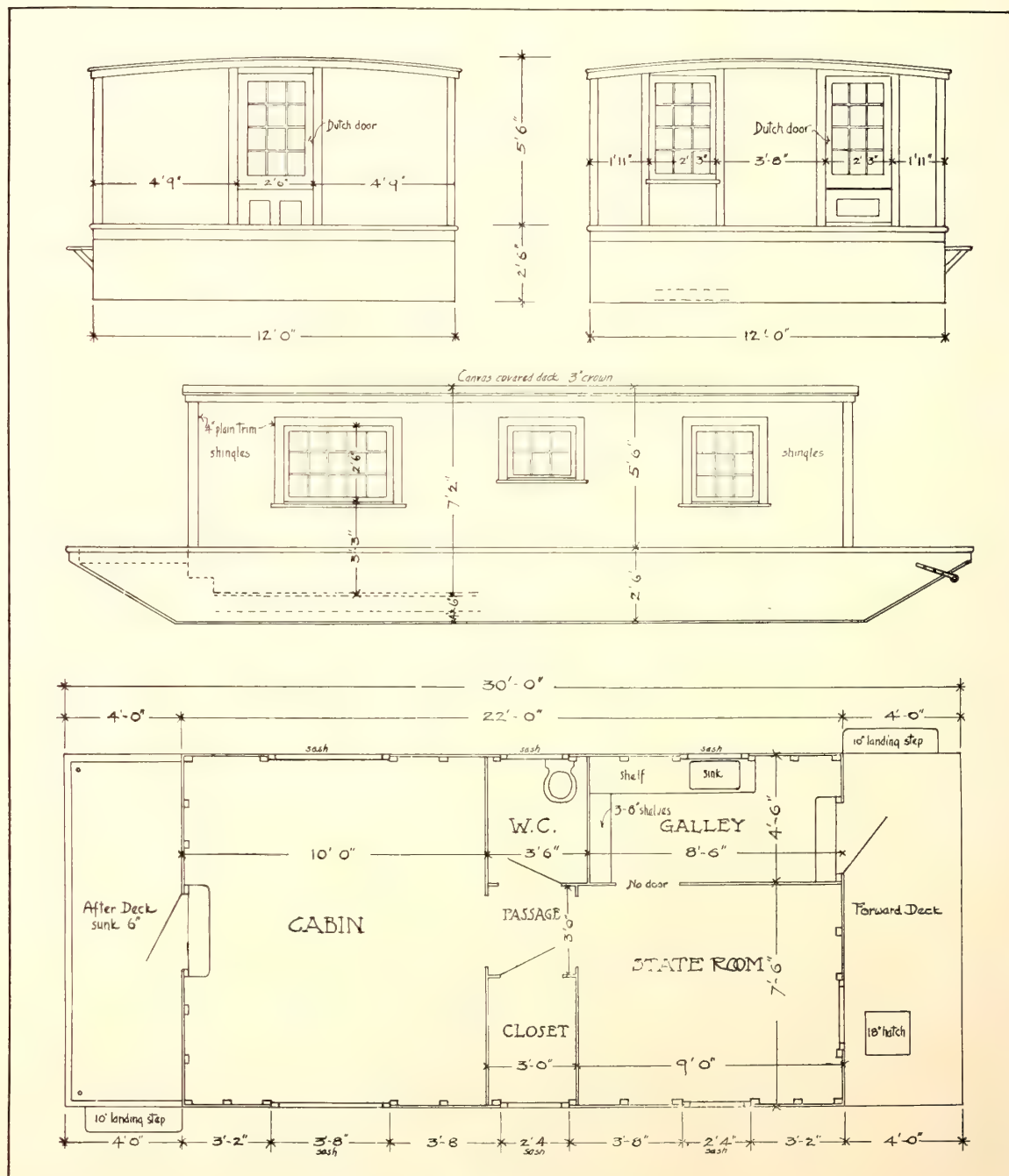
Bow View of "Yankee"

over each side of the hull three feet six inches, forming the under beams for the piazza or galley on each side. The deck is 2-inch spruce, tongued and grooved. The house is set on this deck, bolted with iron rods at proper intervals and studded with 2 x 4-inch stock and 4 x 4-inch at the corners. The outside of the house is covered with weather boarding. The windows and window frames are stock sizes. The roof is 1-inch white pine, tongued and grooved, covered with heavy canvas and painted. The upper and lower deck railings are built of 4 x 4-inch uprights, and stiffened with iron rods. The netting around the upper deck is of the ordinary 1 1/2-inch wire variety.

The dining-room is of the same general construction as that of the house on the main deck. On both sides of the house, under cover, are two stairways to the upper deck. The dining-room is directly over the kitchen, and is connected by dumbwaiter. All interior woodwork is painted white with the exception of the dining-room, which is stained antique oak. The sides of all walls are covered with burlap of different shades. The living-room has an open fireplace with a wooden mantel and a large mirror above. This room is entered on both sides forward through Dutch doors, the upper sections of which are of glass. In the forward end of the room is a bay window and a window-seat.

The hall, three feet wide, runs one foot out of center the entire length of the boat. On the starboard side, adjoining the living-room, is the owner's large, double stateroom, with two windows, two large closets and connecting with its own private bath, which contains bathtub, closet and basin. There is also a large linen

closet connecting with the bathroom and the hall. Aft of this room, on the starboard side, is the kitchen, fitted with a single oven range, the same type as is used in a house ashore, with hot water boiler, sink, dressers and folding wall tables. On the port side, in the after end of the house, is the cook and steward's room, fitted with a wash-basin and hanging closet. Adjoining this room, going forward, is the guest room, fitted with basin and a large hanging closet. Next to this room, going forward, is a bathroom fitted up



Plan and Elevations of "Yankee"

very much the same as the one on the starboard side. Adjoining this is a double stateroom with basin and roomy closet. The whole is conveniently arranged.

is absolutely open from one end of the boat to the other, and has about four feet head-room. On the forward deck is a capstan capable of handling a 350-pound anchor. There



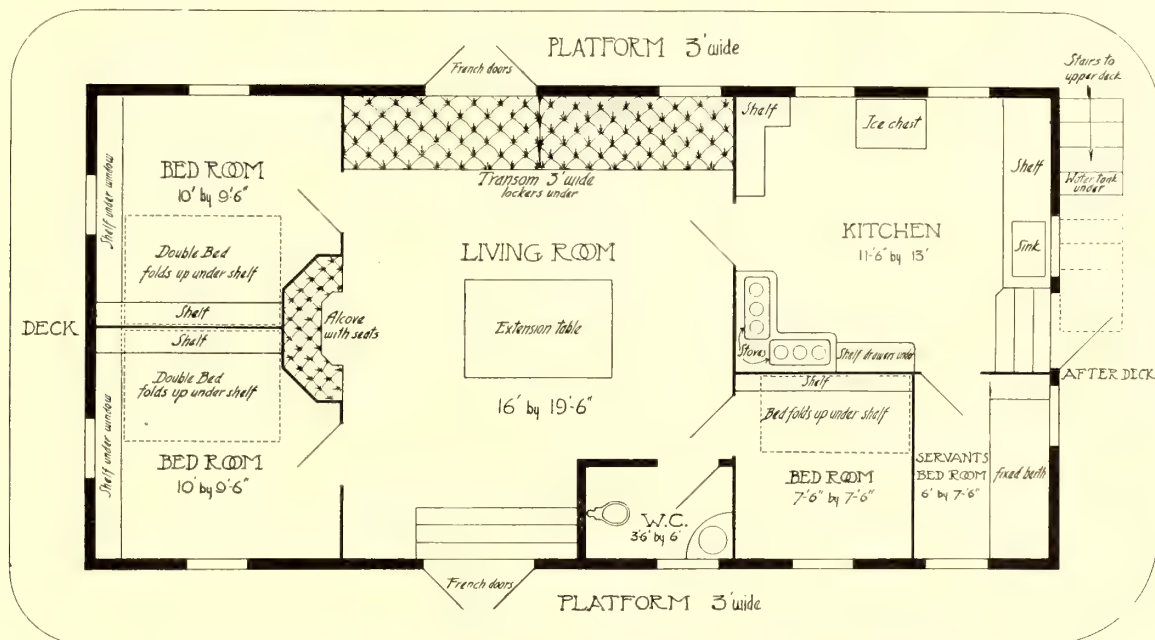
"New Netherlands"



The Upper Deck Is an Essential Feature for Life on the Water

There is running water, hot and cold, throughout the boat, and a tank capacity on the upper deck of about 2000 gallons. All the water is circulated to the basins, tubs and other fix-

are two landing gangways, one on the starboard side forward and one on the port side aft. The dimensions of "The Moorings" are as follows: Length over all 71 feet; breadth of



The Plan of "New Netherlands" Showing the Arrangement of the Rooms

tures by gravity flow, no pumps being required. On the after deck is a toilet room for the cook and steward; there is also space for an ice-box and hatch to the hold. The hold

hull, 23 feet 6 inches; extreme breadth, including piazza, 29 feet 6 inches; draft of hull, about 8 inches. The cost of the boat was about \$7800 complete. Two servants, steward



Aft View, Keble College Barge



Bow View, Keble College Barge



House-boating at Henley

sidered before a house-boat is added to one's possessions, or before this particular way of passing the summer is adopted.

That the house-boat brings many joys to many persons is amply attested by the fact that it has now become a thoroughly popular and widespread form of living. It is a sport—to use a convenient if not altogether happy expression—that appeals to many. Not only does it appeal to many, but it is a form of pleasure that can be indulged in by persons of very various means. It is, therefore, one of the most democratic of sports, being quite without—if need be—the large expense that is attendant upon motoring or other expensive fads. The house-boats described in this article show a considerable variation in price, yet each boat is completely adapted to the needs of its individual owner, and meets exactly all requirements.

and cook, are carried.

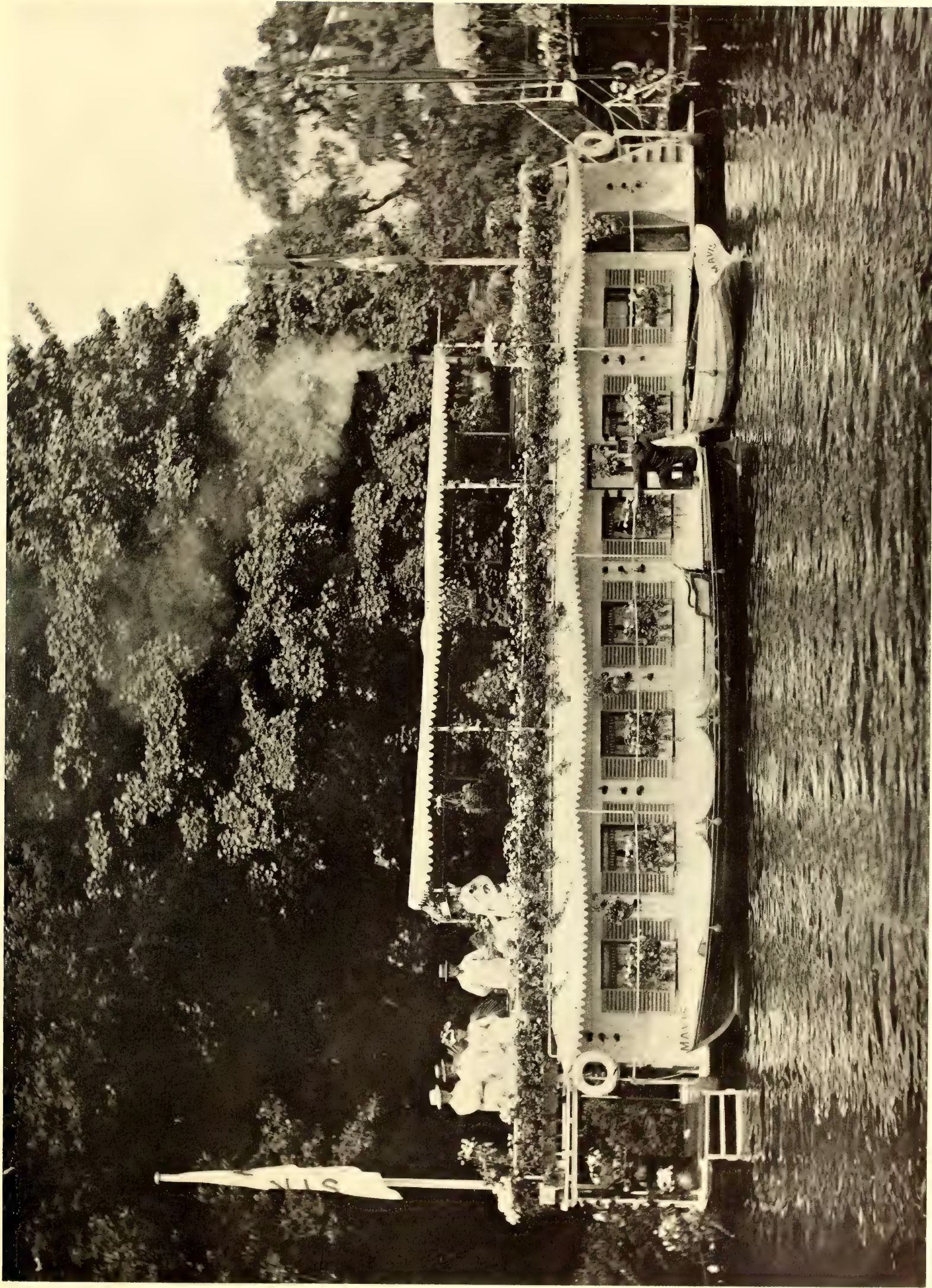
Success in house-boat life is, of course, largely dependent upon the interest in it taken by those who adopt it as a mode of passing the summer. Personal interest in a sport is a first essential in any successful enjoyment of it. One should not be tempted by the thought of cheapness and economy in undertaking to live upon a house-boat; the manner of living, the pleasure it may give, the relaxation it may afford, the change it will bring—all these are essential matters that should be fully weighed and con-



An Interior of a House-boat on the Thames



A Typical House-boat on the Thames



An Upper Deck, Surrounded by Growing Plants, Is Often a Feature of the House-boat on the Thames

THE CHOICE OF A DOG

BY
HUGO ERICHSEN

IT IS natural that people should love dogs, for since the earliest ages, long before the historical period in Europe, there is evidence that man possessed the dog and that a close companionship existed between the two. Even kings and queens did not disdain the friendship of canines, and it is a matter of record that Queens Elizabeth and Victoria were de-

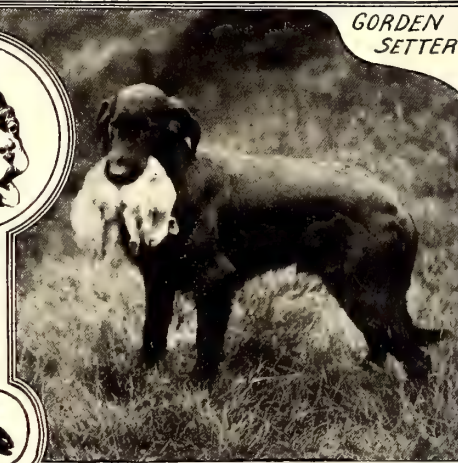
votedly attached to their dogs and that James I, Charles II and Henry VIII took a great deal of interest in the stock of their kennels. For ages the dog has been the theme of historians, philosophers, scientists and poets, who have penned many brilliant tributes to his faithfulness, unselfish devotion and sagacity. Of these the eloquent panegyric pronounced by the late Senator Vest during a so-called dog case in court, many years ago, is probably best



SCOTCH
COLLIE



GORDON
SETTER



FOX TERRIERS
AT PLAY



ENGLISH
BULL-DOG



BEAGLE
PUPS



known in this country and only approached, but not equaled, by the celebrated eulogy of Buffon, the eminent French naturalist. It is undeniable that these encomiums are richly deserved, for no other domestic animal has ever done as much to guard and save life and property. For an example, we need go no further than the unparalleled record of Barry,

the noble St. Bernard, who actually saved no less than forty persons and then perished in the attempt to save the forty-first. Similar instances are not rare.



KING CHARLES SPANIELS

When the descent of the dog from two species of wolf is taken into consideration, his gradual development into the intelligent type of to-day appears to be truly remarkable. No one can study dogs without observing that they apparently possess every mental if not moral faculty of man. Our own aboriginal emotions, such as love, hate, jealousy, irritability, sulkiness, shyness, shame and guilt are clearly expressed in their faces.

But their good qualities always outshine their bad and more trustworthy and sympathizing companions can not be found anywhere. They seem to comprehend everything that transpires. Small wonder, then, that dogs are more highly esteemed to-day than ever before in the history of the world.

It is interesting to note, in passing, as it were, that the dog is the only animal that dreams, and that he and the elephant are the only animals that understand looks and expressions.

In the selection of a dog of course many things are to be considered. And the choice is not always easy, particularly when one is a lover of various breeds and has no strongly expressed predilection. But even when one can readily tell which sort one likes best, partiality should be tempered with judgment. The purchaser should not be carried away, for instance, by the prevailing fashion in dogs and allow himself to be induced to acquire a canine that is not adapted to his wants. In the United States, at present, the collie is the most popular breed, and some people seem to labor under the delusion that he may be kept under any circumstances and yet thrive. But these persons evidently forget that the collie is accustomed to a great deal of exercise in his native state and can not be expected to remain in prime condition when he is closely confined. One of the most beau-

tiful collies I ever saw was consigned to an early grave, because he was kept shut up in the house and not permitted to romp. How that poor dog would have reveled in freedom!

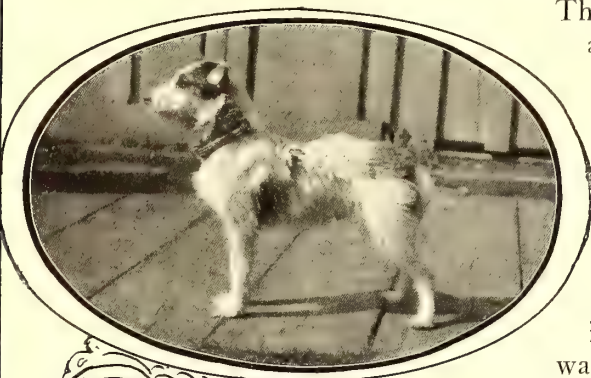
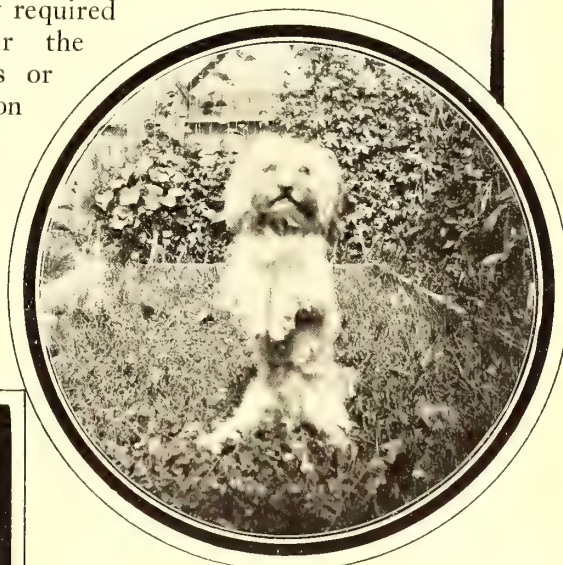
While I have no hesitation in conceding the beauty of the rough-coated collie, I must confess that I have often wondered why the smooth-coated one is not bred more extensively in this country, for this dog possesses all of the good qualities pertaining to his breed. He is preferable to his long-haired brother, moreover, because he does not bring so much mud into the house and does not have to be brushed occasionally to keep his hair from matting.

This, by the way, is an advantage presented by all short-haired dogs, and should be remembered whenever a canine for the house is to be selected.

After deciding upon the breed that is best adapted to his wants, the prospective purchaser should endeavor to procure the purest strain of the species he fancies. Many persons are inclined

to scoff at the pedigrees of dogdom aristocrats, but it is certainly easier to find purchasers for either the originals or their progeny when particulars and references can be given, to say nothing of the prizes that may be captured at dog shows. Incidentally it may not be amiss to mention the fact that in numerous instances these prizes have more than paid for valuable animals, thus justifying the judgment of their owners.

The choice of a dog is greatly facilitated if the purpose for which he is intended is clearly borne in mind. Not being employed in securing game, a watch or house-dog, for example, is hardly required to have either the scenting powers or the conformation necessary for speed and endurance found in hunting dogs, but in the larger breeds should

WIRE-HAIRED
TERRIER

POODLE



A BUSHEL OF BULL TERRIERS

be adapted for an attack on intruders and in the smaller show a disposition and intelligence fitted for the guarding of persons and property. Among the large breeds I

would unhesitatingly place the St. Bernards first. They are courageous, very intelligent, affectionate and faithful, besides being good tempered and first-rate watch dogs. But, like the collie, they require a wonderful amount of liberty, and should not be kept closely confined. Their dignified, sweet and noble expression of countenance, majestic size and fine coat have endeared them particularly to the lovers of beautiful dogs and rendered



ROUGH-HAIRED ST. BERNARD

such a comical appearance that all who saw him were convulsed with laughter, while he slunk guiltily aside. On other occasions he would saunter out of the hen house with an egg concealed in his cheek, looking as innocent as you please. These things happened in the days of his puppyhood when he was naughty; later on there was no cause for



GREYHOUNDS



RUSSIAN WOLFHOUND



BULL TERRIERS



ABERDEEN TERRIERS

them deservedly popular. I am now speaking of the rough-coated variety; the smoot-coated, if I am not mistaken, is not bred in this country at all, probably because it lacks some beauty, although it possesses all the other characteristics of its race. Having owned three St. Bernards, I believe I am qualified in pronouncing judgment upon these dogs. For sagacity, fidelity and a sweet temper, they are certainly unsurpassed. They may be safely entrusted with very young children and constitute a dependable guard of honor to every woman in the household. In my experience, however, a St. Bernard that has been reared at home is preferable to one raised in a kennel. "Prince Bismarck," the best dog of this kind I ever had, came to us on an Oakland county farm in Michigan as a puppy, and was raised on farm products, including skimmed milk. While we were subsisting on the fat of the land, he saw to it that he got his share. One day he inserted his head in the bran bag in the barn and began licking up the contents. I presume some of the bran got into his nostrils and caused him to sneeze. At any rate, when he pulled his head out, it was powdered with the whitish bran, and the dog, emerging from the barn door, presented



A TYPICAL ST. BERNARD

complaint. His death was caused by poison, when he was about five years old, by some conscienceless scoundrel.

It is a pity that Newfoundlands are no longer in favor, as this breed possesses many points of excellence. I remember one fine dog of this kind, owned by my wife's family, that was every bit as intelligent as any St. Bernard that ever drew breath. On wash-days he used to receive the washwoman with barks of exultation, take her gently by the sleeve and conduct her down into the basement up to the tubs, as if to say: "Here you are; now go to work."

Of the other large breeds it is only necessary to mention the great Danes and mastiffs, both of which are still extensively bred but do not seem to be attracting as much attention as formerly. Of the great Danes I can not speak from experience, but once upon a time I owned a mastiff who was as strong as an ox and as obstinate as a mule, and ever since I have had the impression that this breed is decidedly inferior to the St. Bernards.

Of the medium-sized dogs, probably none are as graceful as English greyhounds, unless it be their Italian cousins. Their speed is said to be equal to that of the fleetest horse, but there appears to be some truth in the statement that these dogs are deficient in attachment to their master and in general intelligence. In England they are principally used in coursing, and the only chance the hare has of escaping is to turn and turn about. But in this country they are merely regarded as ornamental.

Deerhounds, on the other hand, which are similar to the greyhound, but much longer and rough-coated, are most affectionate and very good watch dogs. These are the dogs of which Sir Walter Scott was so fond that he gave them the run of the study at Abbotsford.

As his name indicates, the coach dog, or Dalmatian, is principally used in this country to follow a carriage and not as a pointer as is the case in his native land.

Of the smaller breeds none is so well known as the bulldog, a canine of English origin that is not in high favor in trampdom. Every hobo is aware of the fact that it is better to give this animal a wide berth, as the bulldog is decidedly dangerous when aroused, and does not give warning of an attack by barking. Instead he flies straight at the throat of the intruder and is exceedingly difficult to dislodge. In fact he will not, as a rule, let go until his victim is partially suffocated. Endowed with an indomitable courage, he yet rarely assumes the offensive and is seldom ill-tempered. He readily submits to great liberties being taken by those who are familiar with him, but is very rarely molested by strangers because of his morose, forbidding-looking appearance. Those who are best acquainted with him say that the bulldog is kind, faithful and affectionate to his masters, and that no guard is ever more faithful in the discharge of his duty.

That the bull terrier should possess undaunted courage is not strange when we reflect that the blood of the bulldog flows in his veins; he is also a faithful guardian of persons and property. But, unlike the bulldog, he is neat in appearance and of a lively disposition, besides being of a loving and gentle temperament when well trained. As a watch dog he is on a par with the bulldog and the Boston terrier, to whom he is closely related.

There was a time when French poodles and pugs were very popular, but of late they are seldom encountered. Throughout Europe the poodle is known as one of the most intelligent breeds in existence, equally well adapted to become a pet or companion and very smart and vigilant as a guard. He is very affectionate, clever and sagacious, but jealous to a fault. Since he is, moreover, inclined to snap and growl at strangers, his loss of popular favor is not to be wondered at.

When young, the pug is a very smart, showy and active

dog, but as he advances in age he becomes a greedy eater and is inclined to get very fat and correspondingly indolent. He is very affectionate and of a placid disposition. His appearance of dignity and ferocity, however, is generally misleading, as he is often an arrant coward and therefore unreliable as a watch dog.

Cocker spaniels are not so much in vogue now as they used to be and certainly deserve more attention, as they are excellent house dogs, intelligent, alert, affectionate and faithful.

Hunting dogs should also be more extensively employed in this respect, and can be as easily house-broken as they are trained for the field. The Gordon and Irish setters, though a trifle restless under indoor confinement, soon adapt themselves to their new surroundings and do well if given enough exercise. The beagle, a miniature hunting hound, that resembles a foxhound in color and in many other ways, is not as extensively bred in this country as he should be, for he is highly commended by those who know him best. In England he is largely used in rabbit hunting, and as this sport is quite common with us, his popularity is assured once he is more widely introduced. The employment of hunting dogs as household companions in no wise interferes with their usefulness in the field, provided discipline is not relaxed.

"Bob," my fox terrier, has never seen a fox and probably never will. But you should have seen him catch and kill his first rat. The rodent, with "Bob" in full pursuit, sought refuge in a sewer pipe. Here it would have been perfectly safe, but the dog, in his efforts to extricate his head, gave the pipe a violent twist which scared the rat and made it attempt a dash for safety. But before it reached the opposite side of the alley "Bob" had it and was shaking it vigorously after the manner of his kind, breaking its spine at the first bite. "Bob" has been taught a great many tricks; he can give his paw, speak, sit up, and jump through a hoop. But, like all the members of his family, he is a restless beast, and is so fond of running away that he can only be kept at the price of continual vigilance. He is, however, an excellent watch dog, and never fails to announce the arrival of strangers. What I have said of him, of course, applies to the whole breed, which is very intelligent, plucky, quick and yet of a dapper appearance. As puppies fox terriers are sometimes inclined to be mischievous and get rid of their superabundant vitality by tearing wearing apparel into shreds, digging holes in rosebeds, etc. But they can soon be made to see the error of their ways when subjected to discipline.

The Scotch or Aberdeen terriers have a character that is as quaint as their appearance. They are homely dogs, but faithful unto death. "Grayfriars' Bob," whose master died in 1858 and who watched by the grave in Grayfriars' Burying-ground, Edinburgh, until he died himself in 1872, belonged to this breed.

The fawn Pomeranian spitz is what young ladies are accustomed to call "cute," and very popular in England. He is very lively, cheerful and affectionate, and exceedingly sharp and active as a guard.

Among the toy spaniels, so-called, that are also a charming lot, the Blenheim spaniel is a great drawing-room favorite. But, like all toy dogs, he is apt to be somewhat delicate, as he is usually much confined to the house and gets but little exercise. He is generally fairly intelligent, but, like a spoiled child, somewhat inclined to be wayward and troublesome. As he is, however, in most instances kept more for his good looks than any other qualities, that is of no consequence.

Household Ventilation

By Ralph Adams Blake



HOUSEHOLD ventilation is concerned with the sanitation of the house by means of pure air. Its primary dependence is on a good supply of good external air. It is not always possible, even if it should be desirable, to locate the house in a breezy neighborhood, but sites in which the air has a tendency toward stagnation should be avoided. So also should sites which are reached by winds from noxious sources, offensive cow stables, for example, stagnant water and similar sources of disease. A house that faces the prevailing winds, or in which the most used rooms are reached by the prevailing winds, is to be preferred to one in which no advantage is taken of natural air movements.

Ventilation is the science of air movement. It is concerned with natural movements and artificial movements. Natural movements are those of the free external air, over which man has no control, but which he must so far as he can subdue to his own use, and which is the basis of all artificial air movements. Artificial movements are those brought about or created by human agency. Their control is dependent upon the velocity of the wind and the difference between the indoor and outdoor temperature of the house.

A good ventilating system, that is, one that has efficiency and which can be depended upon for service in all weathers and at all seasons of the year, must be artificial. No dependence can be placed on the wind, for not only is it exceedingly variable by nature, but in the harsh North American climate it is quite impossible to obtain proper ventilation by the simple opening of doors and windows. And ventilation, of course, is something wholly different from a "cooling off" process. The air of a house must be changed in order to be made fit to breathe, a change as imperative and as important as any other cleansing process. The average house, however, is apt to be much less ventilated in winter than in summer, because the occupants do not realize the necessity for such frequent air changes as follow, as a matter of course, in the warm season. But ventilation is not a seasonable

affair, but an all the year round necessity, and such devices as are employed for ventilating purposes are due to this fact.

Otherwise very efficient ventilation would be had by opening all the doors and windows. This would not ventilate the plumbing system nor the heating system, but it would result in thoroughly changing the internal air, the more especially if the house be situated in a windy region. This is the simplest form of household ventilation, and effective as it is in the summer, it is less effective in the spring and fall, and in the winter it is of so little value as to be scarce worthy of mention. But this does not mean that windows should not be opened in the cold season. As a matter of fact they should be opened at all times whenever possible, but in the cold weather some assisting devices are needed, for a room in which a current of cold air has been permitted to enter must be heated before it is again fit for human occupancy.

In the ordinary house ventilation is chiefly effected by the doors, windows, chimneys and other openings. As it is impossible in our northern climates to keep any large opening open for any length of time, various methods of obtaining fresh air from them have come into use. An opening may be effected in the head moldings of the frame, or pieces of wood inserted at the base of the window and air obtained at the junction of the upper and lower sashes, and other devices of like nature.

Inlets and outlets for admitting and drawing out air are also sometimes placed in the walls. Some uncertainty exists as to the best place at which inlets should be located, but they should always be above the heads of the occupants of the room. Several special devices and forms, including protective openings, have come into more or less general use.

The most ordinary outlet is the fireplace, and a very valuable one it is. A room with a fireplace in which there is a fire is generally well ventilated. This result can also be brought about by placing a gas jet or other small heating flame in the base of the chimney. Outlets are also sometimes placed in the wall of a form similar to the inlet; they must, however, be located as far apart from each other as possible.

Old Farmington

Concluded from page 265

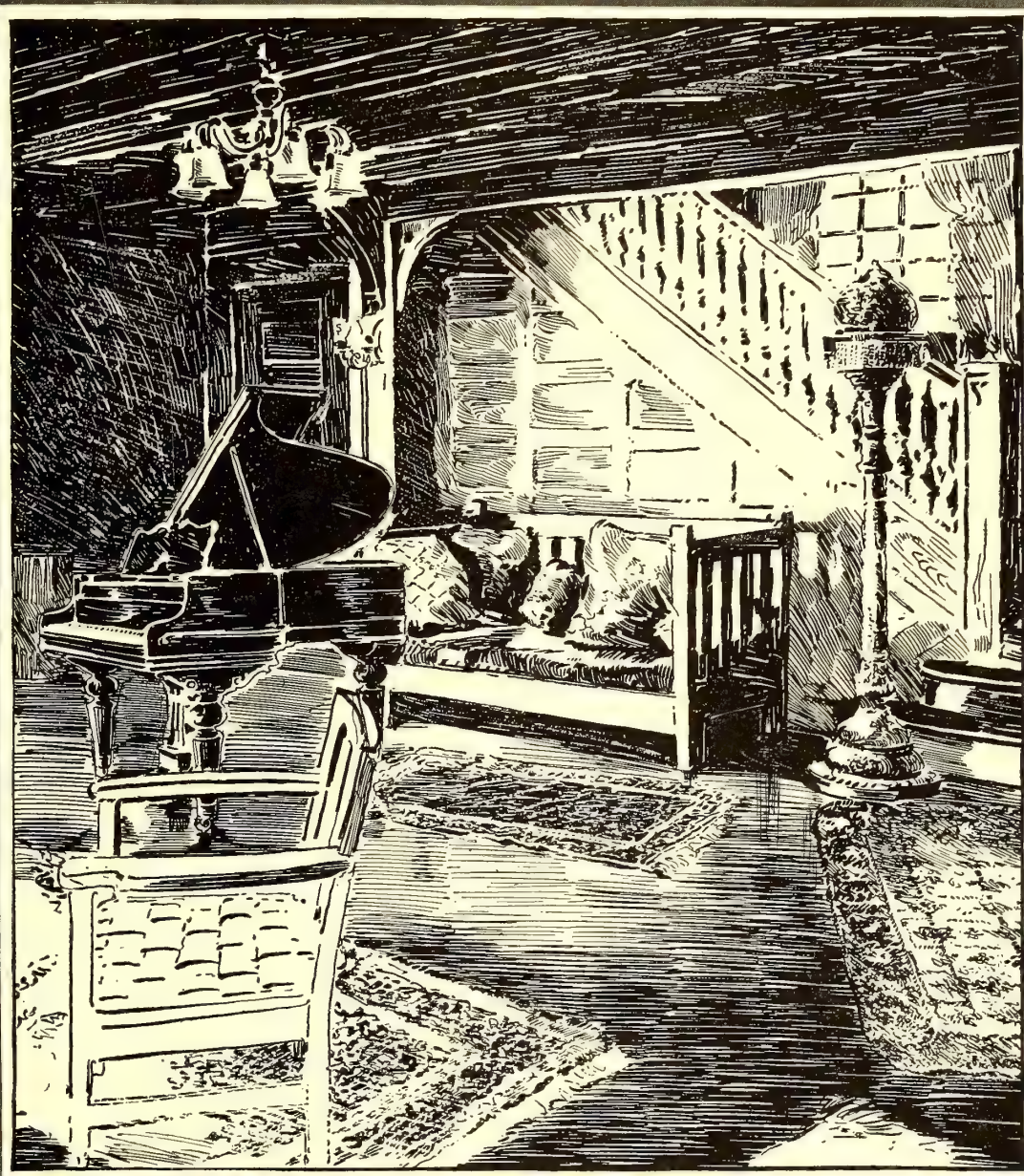
Mr. J. B. Ryan, a most genial host, who welcomes his guests and speeds their parting in the same old style as the innkeeper of Colonial times. It is one of those few old inns in New England which is still preserved with practically all its original characteristics. Few visitors to the inn, however, are aware that a house of 1660 is concealed in the center of the mass of buildings which now form the present hostelry. The inn has an atmosphere of perfect quietude, with its long rambling roof resting under the shade of the magnificent elms with which it is surrounded. One of these elms, still living, was planted in 1774. The old tavern sign of the inn is in the possession of Julius Gay, and bears a picture of a house on one side and on the reverse that of a goddess armed with spear and shield in apparel better befitting the heat of summer than the blasts of winter. She was doubtless the first goddess to bear on her shield the three grape vines of Connecticut. General Washington, during the Revolutionary War, stopped here on his way through Farmington to meet General Lafayette. The old house has a smoking-room, with its old fireplace filled with blazing logs, where have

hung through all these years the original cranes and pots. It is a quaint and cheerful place full of old memories.

In the conclusion of this paper, I can give no better expression than the one contained in Mr. Robert Brandagee's "Farmington Myth."

"When the Lord made the world, He made Asia, Africa and Europe, and last of all He made North and South America. He made the Americas with special care, as that is the place where the nations of the world would finally come together. When the Lord was making New England, one of the little angels asked that he, too, might make a State. So the Lord let him make the State of Connecticut. As the little angel shaped the rivers and built up the mountains, his cheeks were red with excitement. But when the work was nearly finished, there was a large hollow, and the material was all gone. Then the little angel was overwhelmed with confusion. But the Lord took him kindly by the hand, and the Lord took from the folds of His mantle some of the stuff of which paradise is made, and he fitted it into the hole, and the place was Farmington."

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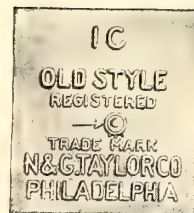


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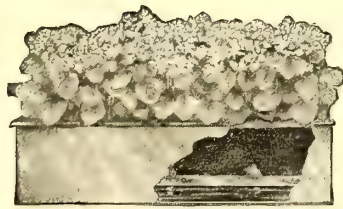
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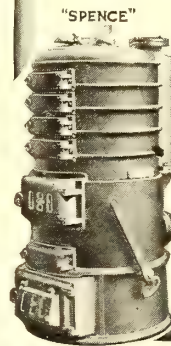
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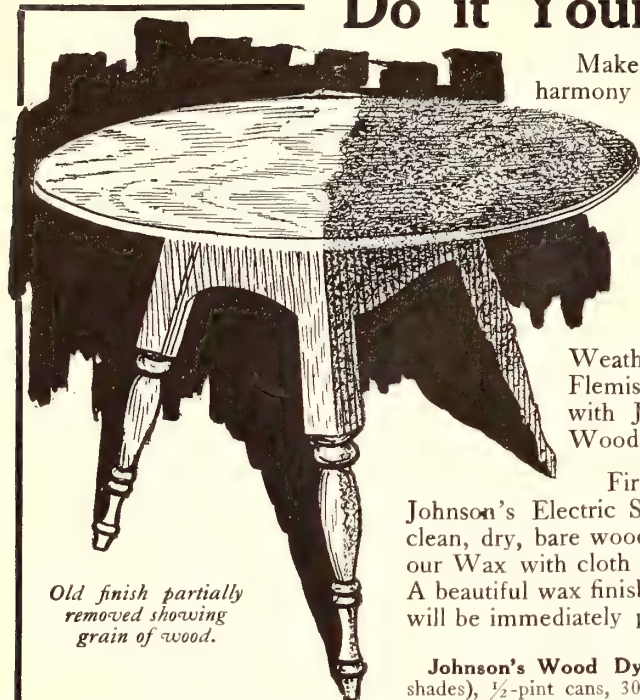
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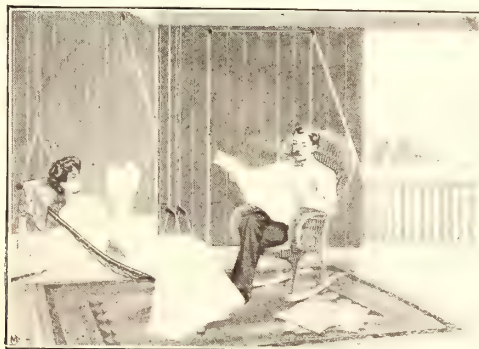
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GARDEN WORK FOR JULY

By Eben E. Rexford

MUCH of the advice given last month pertaining to the vegetable garden, will apply with equal pertinence this month, especially that which has reference to the use of the cultivator and hoe. There will not be many weeds to wage warfare with if this part of the work was done thoroughly during the early part of the season, but the soil will need to be kept well stirred if we would grow vegetables to the best advantage. A light, open soil absorbs whatever moisture there is in the air from the dew-fall, during a dry spell, and enables plants to tide over the period of drouth successfully, but a soil that is allowed to crust over receives no benefit from slight moisture. The regular use of cultivator and hoe puts it in shape to avail itself to the fullest possible extent of dews and light showers, and the gardener must work on the principle that "every little helps."

The lawn will come in for a good deal of attention now. The lawn should be cared for regularly, and thoroughly, if we would make it a source of pleasure. A neglected lawn soon becomes an eye-sore, and rapidly goes from bad to worse. In seasons of ordinary moisture, it should be mowed every third day. In dry seasons once a week may be often enough to cut the grass. No hard and fast rule can be laid down. The owner must bring to the matter careful study and keen observation, and be governed by conditions that prevail. Which is simply another way of saying that you must mow the lawn when it needs mowing.

Do not make the mistake of cutting the grass too close. Never shave the sward. Simply clip it. A closely-shaven lawn "shows through." That is, the brown soil is so strongly in evidence that the green, velvety effect which is one of the chief charms of a good sward is spoiled completely. Let enough of the grass-blades remain to hide the roots of the plants, and the soil about them. Set the mower so it will clip the grass about two inches above the root. Many a good lawn has been ruined by too close mowing. Ruined not only in looks, but in the health of the sward.

The best type of a lawn-mower has ball bearings and runs easily if kept clean and well oiled. Those having five blades are best, as they do the smoothest work. A less number of blades leaves the sward with little but distinct ridges, which detract greatly from the general appearance. A velvety look can only be secured by an even clip. A sixteen-inch mower is about the right size for the small lawn, where women and children often do a good deal of the work. See that it is kept in first-class working order. In other words, never allow it to become clogged at the ends of the shafts with grass, and never allow it to get so dry that its bearings give off a wearing sound when it is in operation. It is a good plan to oil it well every time you use it. Use a good grade of oil, always. Put it under cover when not in use. If left exposed to alternating storms and sunshine, its working life will be shortened at least a third.

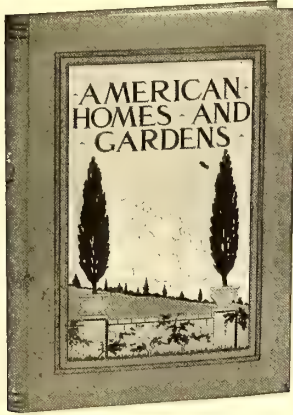
To rake or not to rake is a question upon which a great many persons agree to disagree. One man will tell you that you can't have a nice lawn unless all clippings are removed from it promptly. If left, he argues that they settle among the grass, where they turn brown, and become unsightly, and injure the sward. The next man will tell you that the sward is benefitted by them, and that they decay so rapidly that they do not have a



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chance to become unsightly. My opinion is that this man has the better of it.

You will doubtless need considerable potting-soil next fall. Begin to prepare it now. Make a pen of boards four or five feet square, and about a foot high, and put into it leaves and such other vegetable material as will decay readily. Add to it turfy matter from the underside of sods, and leafmold, if you can get it. Pour over it the soapsuds of washing-day. Stir frequently. Work it over to make it fine and mellow. By and by, mix some coarse, sharp sand into it, and work it over again. Continue to do this all along through the season, and by the time your plants need repotting you will have an excellent compost for them. In fall, rake up the leaves from the lawn and put into the pen, and let them form the basis of next season's compost-heap. We let a great deal of most excellent material go to waste each year, if we do not get into the habit of taking care of it at the right time, which is—when we come across it. Gather it up as you find it, and then you will be sure of it when it is needed.

Chrysanthemums will need careful attention if planted out in the garden. They should be securely staked to prevent their being blown over by sudden and strong winds. They should be pinched back from time to time to make them branch freely. They should be kept from injury by the black beetle. This pest comes suddenly and unexpectedly, does his deadly work with great rapidity, and is gone before you know he has been there unless you are on the lookout for him. Examine your plants daily. If one beetle is seen, make an infusion of soap, kerosene, and water, and declare war at once. Here is a good formula for the preparation:

Soap, 6 oz.

Kerosene, 1 teacupful.

Water, 10 quarts.

Shave the soap finely, and put it on the stove to melt. When liquid, and hot, add the kerosene. Mix well, and when union takes place, add the water. Apply to the plants with a sprayer, being careful to see that some of it reaches every part of them. This will drive away the beetles that have put in an appearance, and keep others from coming.

Asters are often troubled by the same beetle. This antidote is as effective on them as on the chrysanthemum. Use it promptly, and liberally. There is no danger of its injuring the plants.

This month is a good time in which to sow the seeds of perennials. Give them a bed by themselves, in some nook or corner where they will not be interfered with by other plants. Thin them out if they seem too thick, for they will not make good early development if crowded. Let them be an inch apart at first. By and by every other one can be transplanted to the places where you want them to flower, and later on those left in the bed can be assigned to permanent quarters. These plants will bloom for you next season. Of course some of them will be quite different from the plants you saved seed from, when they come into bloom, as there is a strong tendency toward reversions among nearly all in this class, but most of them will give satisfactory flowers, and some will be quite as fine as any the florists send out. There is always a pleasant excitement to the lover of flowers in growing these plants, because of the possibility of getting something new. If you want to be sure of getting a particular variety, you must buy your plants of the florists, who propagate them from division of the root.

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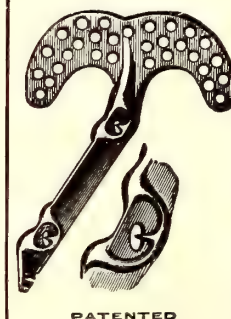
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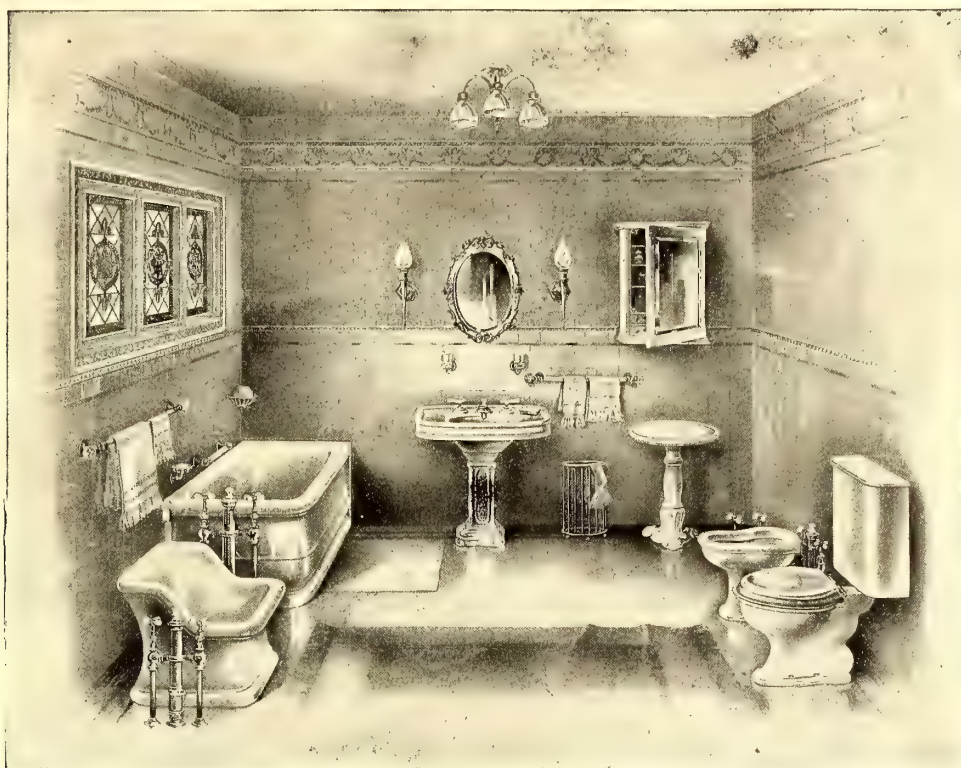
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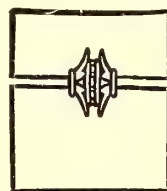
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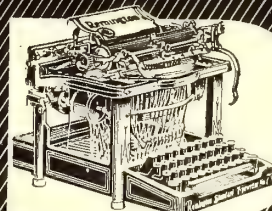
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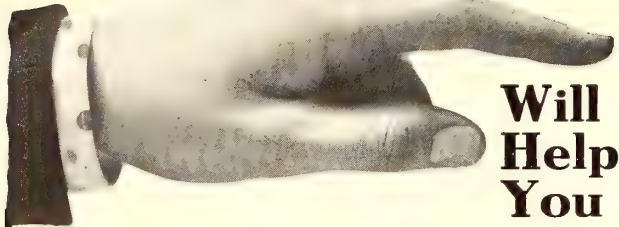
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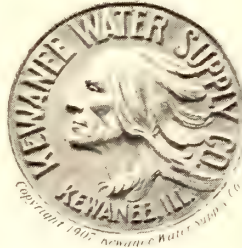
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It is a good plan to go over the garden and mark all inferior plants for removal at the end of the season. We have so many excellent ones nowadays that one can not afford to give space to anything not above the ordinary. By throwing out inferior ones from time to time, and replacing them with improved varieties we soon have a collection to be proud of.

Often we find a good plant growing in the wrong place. Decide where it ought to be, in order to do itself justice, and put it there as soon as possible in the fall. We are constantly making mistakes with new plants, because we do not understand their habits well enough to put them where they belong. These mistakes must be corrected, if we would have our gardens harmonious in every detail. Not only must their size, their habit, and their season of flowering be considered, but their color, as well. Perhaps this is the most important item to take into consideration. It certainly is with some of them. The lilac perennial phlox is an illustration of this idea. Place it near red, blue, or pink flowers and it gives a most discordant note to the general color-scheme. It doesn't look well, itself, and nothing looks well that comes in contact with it. But put it away from other colors, where it will have nothing but white to keep it company, and straightway it impresses you as being a most lovely flower—as it is.

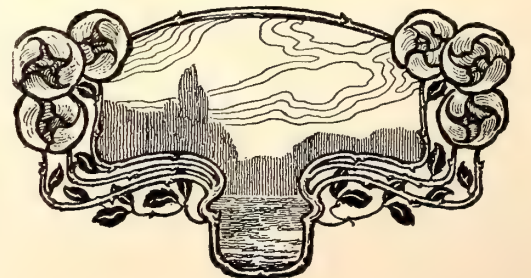
Now is the time to make up your basket-plants for next winter's use. We generally wait until late in the season before doing this, and the result is always unsatisfactory. Instead of having a luxuriant growth of vine and foliage, such as we may expect from older plants, we have a weak little specimen which doesn't show to any advantage because there isn't enough of it to do so. We forget that it takes considerable time to grow good plants. But perhaps, if I remind you of this fact now, you will avoid the mistakes of the past, and profit by them by starting your basket-plants at once.

This reminds me that a correspondent has asked me to give her the names of a few of the best hanging plants. Here is a list of kinds that any amateur ought to be able to grow well:

Tradescantia.	Saxifraga sarmentosa.
Moneywort.	German Ivy. (Senecio.)
Lysimachia.	Sweet Alyssum.
Oxalis, pink and yellow.	

There are other good plants suitable for basket-use, but the kinds I have named will be likely to give the best general satisfaction.

Hanging plants can only be grown well by giving them all the water they need. Being exposed on all sides, and in a stratum of air considerable higher in temperature than that about the plants on the window-sill, the soil in which they are planted dries out rapidly, and they are likely to suffer from lack of sufficient moisture. Some persons tell us they "never have any luck with hanging plants." The reason why, ninety-nine times out of a hundred, is—they don't give them water enough.



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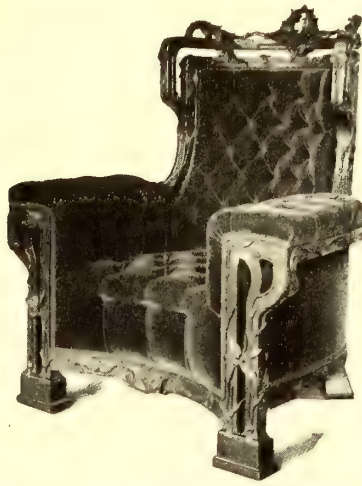
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Assistant Professor, College of Architecture, Cornell University

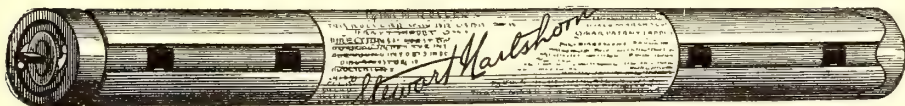
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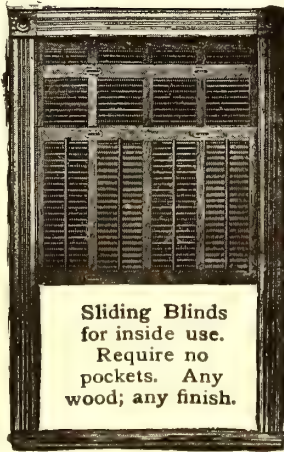


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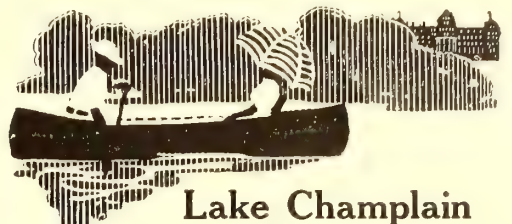
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VINES FOR PERGOLAS AND ARBORS

By Ida D. Bennett

A NY long structure of poles or lattice work has been in the past, before the pergola came into vogue, known as an arbor, and the term is still good enough for that kind of structure, and its treatment is quite distinct from that accorded the pergola, which may find expression in marble, granite or carven wood, and the architectural features of which are to be brought out and emphasized rather than concealed, as is the case with arbors of rough posts, timbers or lattice work, which have nothing artistic to recommend them, and serve merely as a support for vines.

The care of vines on a pergola differs materially from that of vines about an arbor. In the former case they must be kept well within bounds and not allowed to straggle freely about, as they may do to a considerable extent on an arbor. Hence any of the pillar roses are desirable, and by planting a good selection of them one may have an abundance of bloom without an oversupply of foliage. The lack of foliage, which is often a fault in climbing roses, is an advantage, as it allows the pillars, base and capital to be seen. The jackmanni clematis is also a good pergola vine, although on a house or arbor it leaves much to be desired from its habit of blooming at the extremities of the branches with a considerable stretch of bare stems below. The paniculata clematis is far too rank a grower for this use, but is admirable on house or arbor. The jackmanni, when trained straight up the pillars and carried along the entablature, will afford a living frieze of loveliest color and form. Other forms of clematis lend themselves less readily to this form of decoration and spread more or less broadly from the ground up. This makes them available where broad spaces are to be covered, but there should be little or no growth between the pillars of a pergola, the greater part of the growth being diverted to covering the rafters and outlining, lightly, the cornice and pillars.

For effective rafter draping the wisteria is without a peer, as it climbs readily to a considerable height, its foliage is light and it drops its flowers in long, loose racemes from the ends of the branches—an arrangement very artistic for the pergola. Another plant of similar habit but laden with rose-colored flowers is the mountain beauty, Antigonon leptopus. This is a hardy vine as the South and through the Middle States, but requires considerable protection during winter at the North; as the roots are tuberous they may be taken up in the fall and stored in a warm cellar. The Quisqualis indica, or Rangoon creeper, is a beautiful twining shrub from India, where it is much used about the porch pillars, and would do admirably for twining about the pergola columns; it is not hardy, but may be wintered in a warm cellar or greenhouse. Certain of the solanums are desirable vines for twining; among these S. Wendlandii is especially fine and makes a rank growth of many feet in a season, but as the branches are not freely branched and the foliage sparse, it does not conceal, and the immense heads of violet flowers, a foot across, are very ornamental; it is tender and must be wintered indoors. Certain of the tropical tecomas are worthy of culture in positions where their great beauty will be appreciated. Notably among these may be mentioned capensis, with its fine bunches of bright red flowers, which are continually in bloom. Bignonia argyrea violascens, of the tecoma family, has beautifully variegated leaves of green, white and purple, and B. tweediana has splendid yellow flowers—a color rare in climbers.


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Occasionally it is desired to place a few plants along the base or stylobate of the pergola, and there is no better plant for this position than the bougainvillea: this is a partially trailing shrub of stiff, prickly stems and glossy, dark green leaves, the branches terminating in rosy bracts which are highly ornamental. The plant is a sheet of bloom from May to November, and is easily grown and cared for. The effect of the sprays of rosy bloom over the white marble or granite of the base of the structure is artistic in the extreme.

The various passion flowers offer charming types suitable for the pergola; especially is this true of a grafted crimson-scarlet variety which bears its flowers in great racemes two or three feet in length and a foot in diameter, the single flowers measuring some four or five inches in diameter, and as it may be trained to run along the cornice of rafters and drop its great panicles of bloom where they will be most in evidence, it is very desirable. Aristolochia elegans is another tropical vine which is always greatly admired, but is very rare. It is, however, of easy culture, growing readily and rapidly in the hottest situation if well fed and supplied with water. The leaves are dark green, leathery and heart-shaped and very ornamental, but it is the curious flowers which attract attention. These are large and platter-shaped, terminating at the back in a curious, crooked neck, so that the plant before opening much resembles a goose. This is not the aristolochia known as goose-flower, which is a very shy bloomer, while the A. elegans blooms freely in the open air. The face of the flower is a rich wine color veined and mottled with cream and with a large velvety wine colored blotch about the throat, which is greenish-cream; altogether it is a handsome and striking flower, and the branches are easily trained and controlled.

For the arbor or summer house there are all the clematis, of which we have so rich a store, but none better than C. Paniculata, which blooms in September. It is possible, however, by careful selection, to have clematis in bloom from May to November, or nearly. The large flowered lavender varieties which bloom in early summer are followed closely by the white summer bloomers and the red Mrs. Eduard Andre. Later, in August, the native varieties are a mass of flowers, which last until the paniculata is about ready to burst into bloom.

The clematis are to be recommended not only for their beauty, but also for their hardiness and ease of culture, and their freedom from insect pests, which makes the growing of some vines practically impossible. The various honeysuckles are charming when wreathed with their fragrant creamy-pink flowers in early summer, but the attraction they possess for the various aphides, especially the gray, makes their culture, in any but isolated places, practically out of the question.

The passion vines, Constance Elliot and Southern Beauty, are valuable vines for the summer house where a less common vine is desired, but they are not hardy and must be removed to the greenhouse in the fall. As they make a strong annual growth their use is entirely practical.



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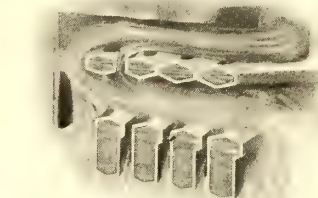
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THE PLUM AS A SUBURBAN
FRUIT

By E. P. Powell

EACH fruit takes its turn, in the enthu-
siasms of pomologists. We are just now
in the plum age, and are overloaded with
varieties, highly commended, but of no sort of
value to the ordinary fruit-planter and home-
maker. Several hundred varieties are cata-
logued as natives, while the list of foreign
varieties and their hybrids is also growing
rapidly. The ambition of pomologists, at pres-
ent, seems to be to increase the length of their
lists, rather than to eliminate inferior sorts.
In New England, and as far south as Mary-
land, the Domesticas carry the day, and the
hybrids are gaining favor. We have, however,
a few orchards which contain two or three
hundred varieties that are mostly natives. Our
fruit catalogues are very slowly learning to
eliminate sorts unfit for general cultivation.

My object in this article is not only to make
a shorter list, such as almost any one may
plant, but to give my own experience with
such as I have tested. Of the European or
Domestica sorts I begin of course with Green
Gage. This plum has never been surpassed,
either in quality or beauty; but to secure it in
its perfection the tree must stand well opened
to the sun and air. It is one of the most long-
lived varieties, suckering very little, and giving
enormous crops annually. Close to this I
would place the old Magnum Bonum—a
magnificent plum in every way; but here again
your tree must stand well open to the sun. It
is necessary to have some variety, like Abund-
ance, nearby, to pollinize Magnum Bonum, or
you will get but meager crops. I have sold
eighteen dollars' worth from one tree in one
year. Both varieties must be well ripened on
the tree, and they require a near market. For
enormous crops and general adaptability,
Bleecker stands at the head; also as a cooking
plum it is unsurpassed, but as a plum to eat
out of hand it is quite second in rank. Coe's
Golden Drop comes after Bleecker, as that
follows Magnum Bonum and Green Gage.
It is a very superior yellow plum of medium
size, giving immense crops, on tall, hardy
trees. Later than these comes the Grand
Duke, a splendid prune-like plum, hanging on
until cold weather. With this we have an-
other of the Green Gage sort, called the Reine
Claude, rich and excellent for either cooking
or eating from hand. Among the very finest
of the varieties to supplement these are Jeffer-
son, Quackenboss, Victoria, Pond, Monarch
and Diamond. With this list I think you will
have all of the Domesticas that you need, un-
less you add Bradshaw as a companion for
Magnum Bonum. These are all large plums,
of superb growth and appearance. The Vic-
toria is a brilliant red, and Pond a rich violet.
Monarch is enormously large and of a dark
purplish blue, and very late in ripening. Dia-
mond is one of the largest, best and most beau-
tiful. Shropshire Damson should be added
as the best of that section, medium size, dark
purple and very productive.

Of Mr. Burbank's productions and intro-
ductions I have tested a large number. Red
June ripens in July, and has not been over-
praised. It is a vigorous grower, very pro-
ductive and of fair quality. Climax I have
not yet ripened, but the growth is upright,
strong, and the fruit is said to be four times
as large as Burbank, looking much like an or-
dinary peach. Shiro ripens in early August,
bearing a most beautiful plum, large in size,
clear light yellow, with a transparent skin.
The quality is a sub-acid, and the flesh is firm
as well as juicy. I like this plum very much
indeed. The Burbank, an introduction from
Japan, follows a little later, and carries itself

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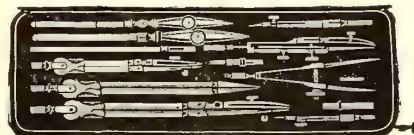
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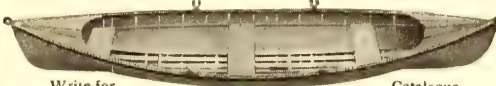
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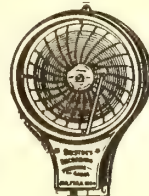
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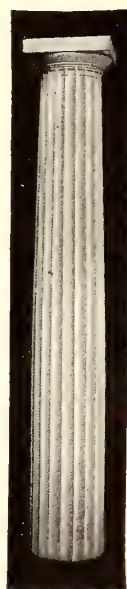
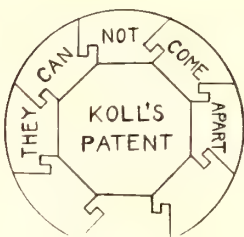
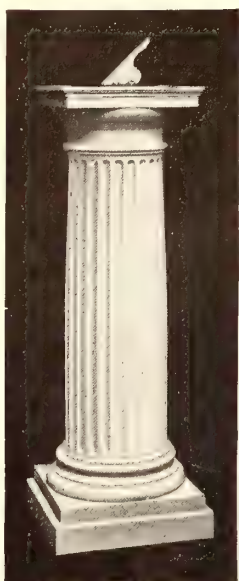
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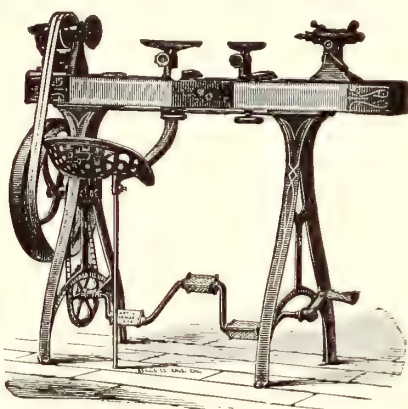
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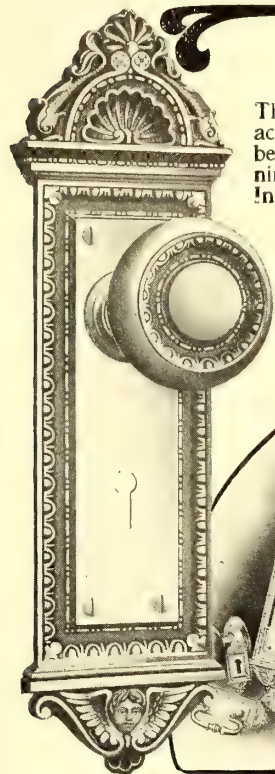
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into September. It is a fine cropper of most beautiful fruit, but the tree is exceedingly sprawling. Sultan or Occident grows a little like Burbank, and the fruit is one of the very best of the Burbank sorts. It falls from the tree when ripe, is of a dull red color, while the flesh is deep blood red. Gold is a very late plum, keeping for weeks after picking. The quality is very satisfactory. Apple is a large and attractive plum, really looking like a medium-sized apple. The flesh is red, quality good, and it is another splendid keeper. Bartlett I have not yet ripened, but I know it to be a medium-sized, dark red fruit, of the richest quality. The tree grows as erect as a Lombardy poplar. America is not at all an acquisition. It bears good crops, of only moderate quality, and not nearly as good as Burbank. I am growing First and Combination. The trees prove hardy, and from Mr. Burbank's recommendation I think they will be a valuable addition to our garden. Wickson has not proved to be of any value in this section. I get some fruit, but not enough to call it a crop; while the tree, a very upright and vigorous grower, is liable to die at any time. We owe Gonzales and Waugh to the men whose names they bear; and they are two of our most promising fruits. They prove entirely hardy, and the quality of the fruit is excellent.

Of native plums I think that an ordinary gardener or orchardist would be satisfied with De Soto, Hawkeye and Milton, adding possibly Forest Garden, Robinson and Weaver. De Soto is bright red and of good quality; Hawkeye of decidedly good quality and firm for market. Milton ripens very early and is of large size and good quality. Robinson is hardy, a light red and early, but rather small. Weaver is a large purple plum, a good bearer, and tree very hardy. Wild Goose is so entirely unable to self-pollinize itself that it should not be recommended for general planting. Hawkeye also fails in being a perfect self-pollinizer.

As a rule grow your plums in clay soil, if you can; although the Japanese and hybrids take well to sandy soil. Give good drainage, and never set out a tree without adequate mulching. This law holds especially good in the Southern States, and in sandy soil. Plum trees will do very well for lawn trees, and grown in groups about your outhouses and sheds. A common farmer's yard may give him an enormous crop and a considerable income. The Bleeckers will serve perhaps best of all around farm houses, together with the Damsons, and growing very close together; but it must be remembered that both of these varieties sucker badly, and if these suckers are allowed to grow you will in a few years have only a thicket. If grown in garden or orchard plant from fifteen to twenty feet apart, and even then the Burbanks and some other varieties will need to be shortened in. Such shortening should be done with common sense, and with the understanding that you cannot compel such trees to absolutely obey you. Wickson must be sharply thinned, and Bartlett the same. Prune during the winter or early spring, but keep out useless growth at all times. You cannot get ideal or model heads on plum trees. A few varieties, like Field and Pond and Guii, are very shapely, so as a rule are Coe's Golden Drop and Bleecker, and some of Mr. Burbank's newer seedlings.

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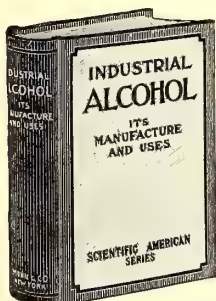
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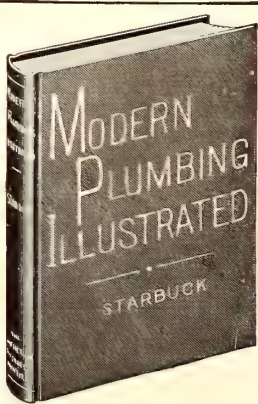


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and crushed. This jarring must continue from the time the petals begin to fall until the fruit is toughened, about eighteen days. Plum knot must be removed as soon as the leaves are off in the fall, and before the spores scatter—which is done in late winter or early spring.



MY GARDEN RECORD. New York: Dodd, Mead & Co. Pp. 190. Price, \$1.00 net.

This is a well-meant help to gain knowledge by experience. It aims to provide a record from one season to the next of successes and failures in the growing of plants. It is primarily intended for use with annuals, whether flowers or vegetables, but it is also available as a record of herbaceous perennials, shrubs and trees. The plan provides space for an index and the record pages proper, on the latter of which catchwords are printed, with space to be filled in with writing. These catchwords seem to be reasonably complete, but the value of the book in general use would have been heightened by the use of ruled pages instead of the blank leaves. If one takes the trouble to fill out these pages with care, one will surely have a useful guide for subsequent garden work.

BIRDS THAT EVERY CHILD SHOULD KNOW. THE EAST. By Neltje Blanchan. New York: Doubleday, Page & Co. Pp. 16+281. Price, \$1.20 net.

There is no need to argue that children should be interested in the birds of the fields and parks, but there is a real need for a book that would present birds in a way interesting to children, or which should supply their elders with the facts that children might be interested in. This need is very completely met by the present volume, the author of which has long since demonstrated both her ability to write on this subject and her keen sympathy with it. This is, therefore, a bird book of genuine interest and indeed of quite urgent necessity. The birds of the fields and hedges are treated with sufficient fulness of detail and in a thoroughly charming and graceful way. Many photographs add to the interest of the text. A number of these are photographs of young birds, very interesting in themselves and vastly entertaining, although it is the adult bird that is most frequently met with, and with which children are most familiar. Perhaps this is why the baby birds are shown. The pictures are enormously clever and add measurably to the interest of this fascinating book. The addition of the words, "The East," to the title, while perhaps explaining the scope of the present volume, may also hint at the production of another treating of other parts of the country. May it have the same hearty welcome that undoubtedly awaits the present one!

THE BOOK OF CAMPING AND WOODCRAFT. By Horace Kephart. New York: The Outing Publishing Co. Pp. 14+321. Price, \$1.50 net.

Offered as a guidebook for those who travel in the wilderness, this book leaves nothing to be desired from the point of view of completeness. The publishers' contention that it is based on "sound 'horse-sense'" is amply justified by the thoroughness with which every aspect of camping and wood life is treated, the practicability of its suggestions, the reasonableness of its ideas. The author concerns



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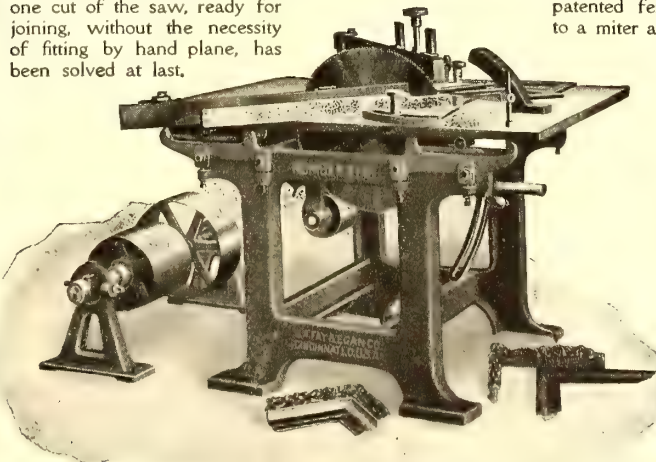
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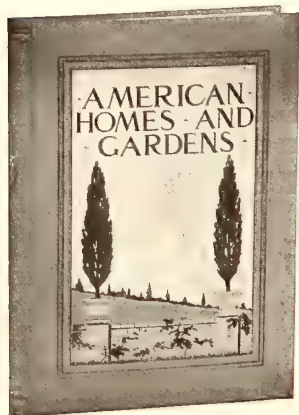
himself with that most useful aspect of camp life, the physical side; he leaves to others the treatment of such topics as hunting, fishing, trapping, canoeing, snowshoeing, the management of horses and pack-trains, and other subjects, on all or most of which, he points out, there are many excellent books. But his theme is the more general one—and surely the more useful—of how to live in the woods, what to take with one, how one should be clothed, how to build shelters, how to avoid pests, what to do in emergencies, in fine, how to live apart from civilization and yet with due regard to health and comfort. It is a book of practical directions and suggestions, very detailed in its treatment, as is quite imperative from the point of view of utility. Illustrations, both photographs and diagrams, are used when needed to elucidate the text. The camper and the lover of life in the woods will find it an invaluable companion in their wanderings, and a book that may safely be consulted on every aspect of life in the wild.

THE GARDEN MONTH BY MONTH. By Mabel Cabot Sedgwick, assisted by Robert Cameron. New York: Frederick A. Stokes Company, 1907. Pp. 18+516. Price, \$4.00 net; postage, 30 cents.

This is a remarkable book, summing up almost every possible floral knowledge required for the garden in an exceedingly able and available manner. The publishers are quite justified in designating it as a library of gardening condensed.

It is concerned with flowers only, and hence garden vegetables are wholly excluded from its scope. The treatment is by month, the flowers being arranged according to the months in which they bloom and then subdivided according to their color. While this arrangement is, in a measure, arbitrary, it is at least logical, and as its purpose is to enable the gardener to choose his plants in a proper order of succession and arrange his colors artistically, no better scheme could have been followed. The text is presented in tabular form throughout, the first column giving the color of the flower; the next its English name; then its botanical name and synonyms; then a brief description of the plant, with cultural directions wherever needed; then the height and situation best adapted to its growth; and, finally, the time of bloom. It is obvious, therefore, that a book arranged on this plan is not only easy of reference, but presents the chief points of information that may be required of any plant in a thoroughly complete way. The colors are indicated in a carefully prepared colored plate, in which sixty-three shades are accurately given, and by which every possible color is listed and determined in the text.

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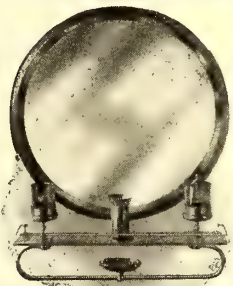


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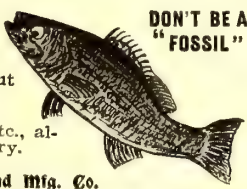
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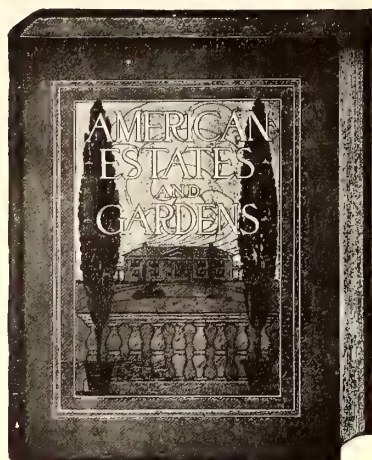
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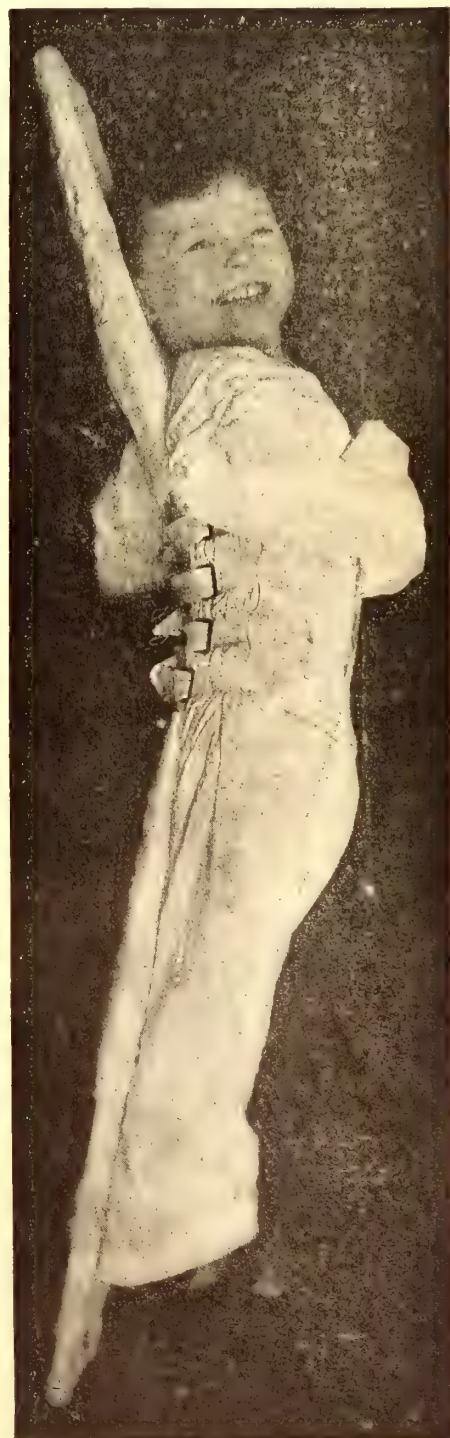
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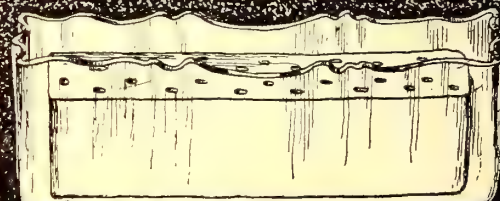
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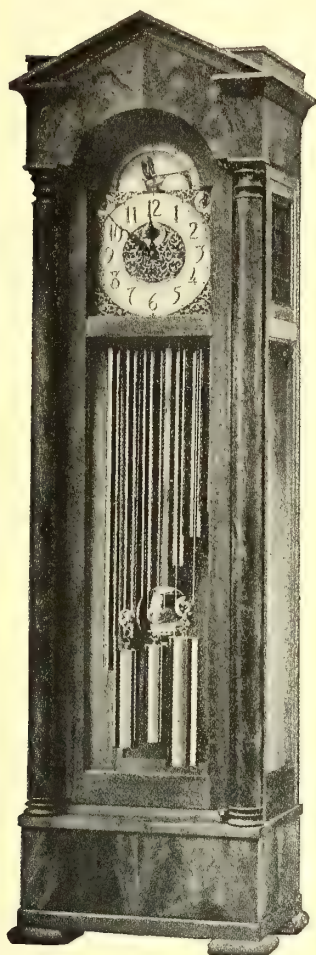
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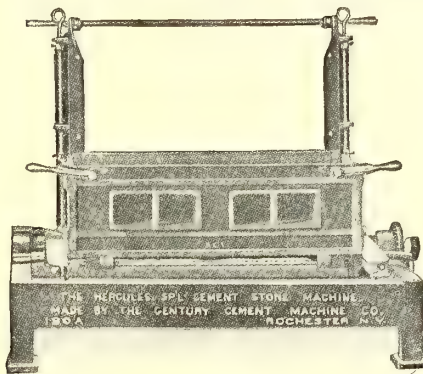
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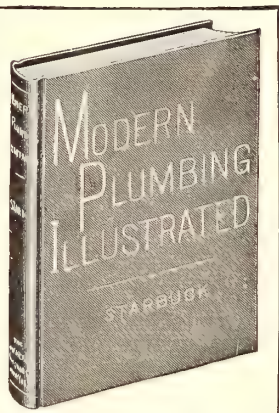
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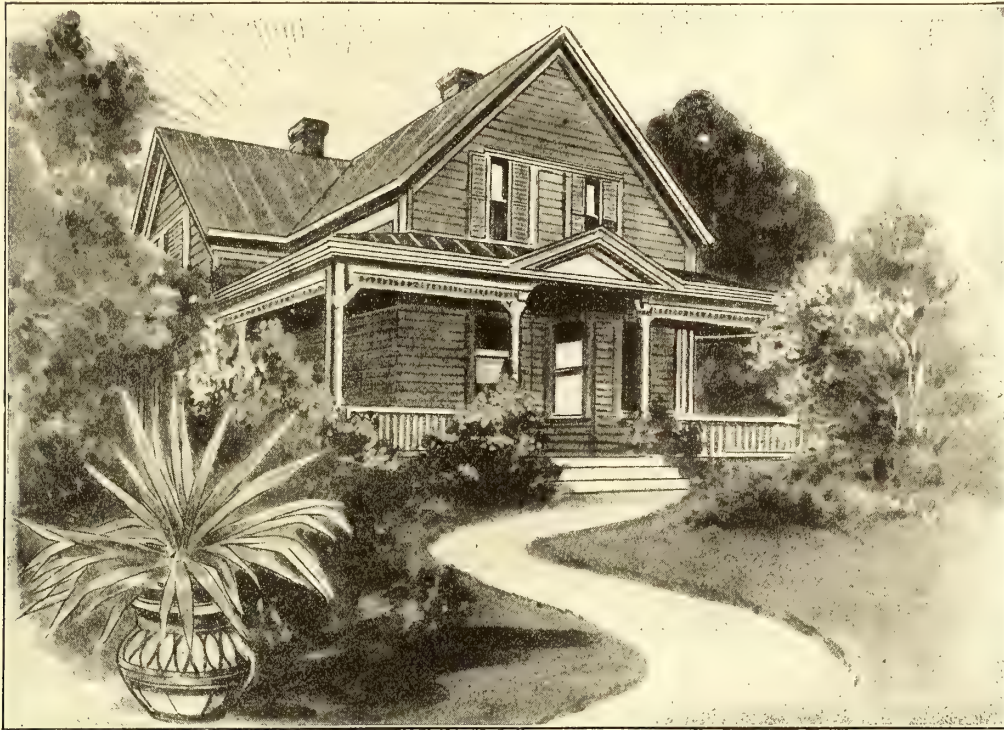
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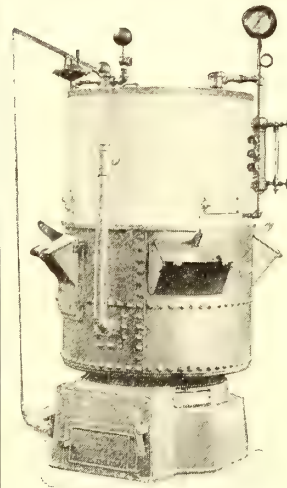
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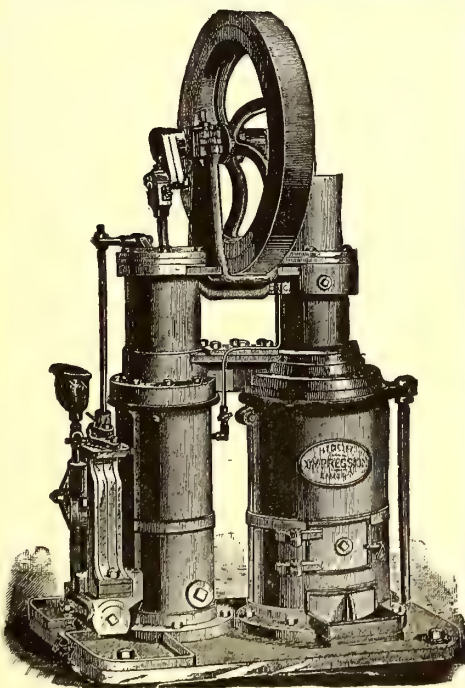


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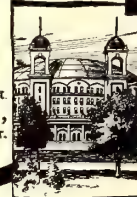
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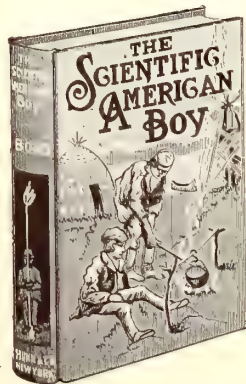
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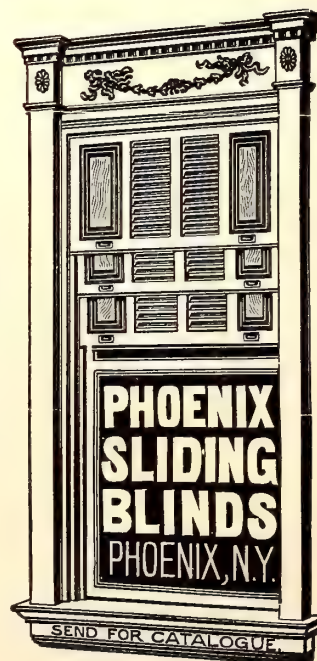
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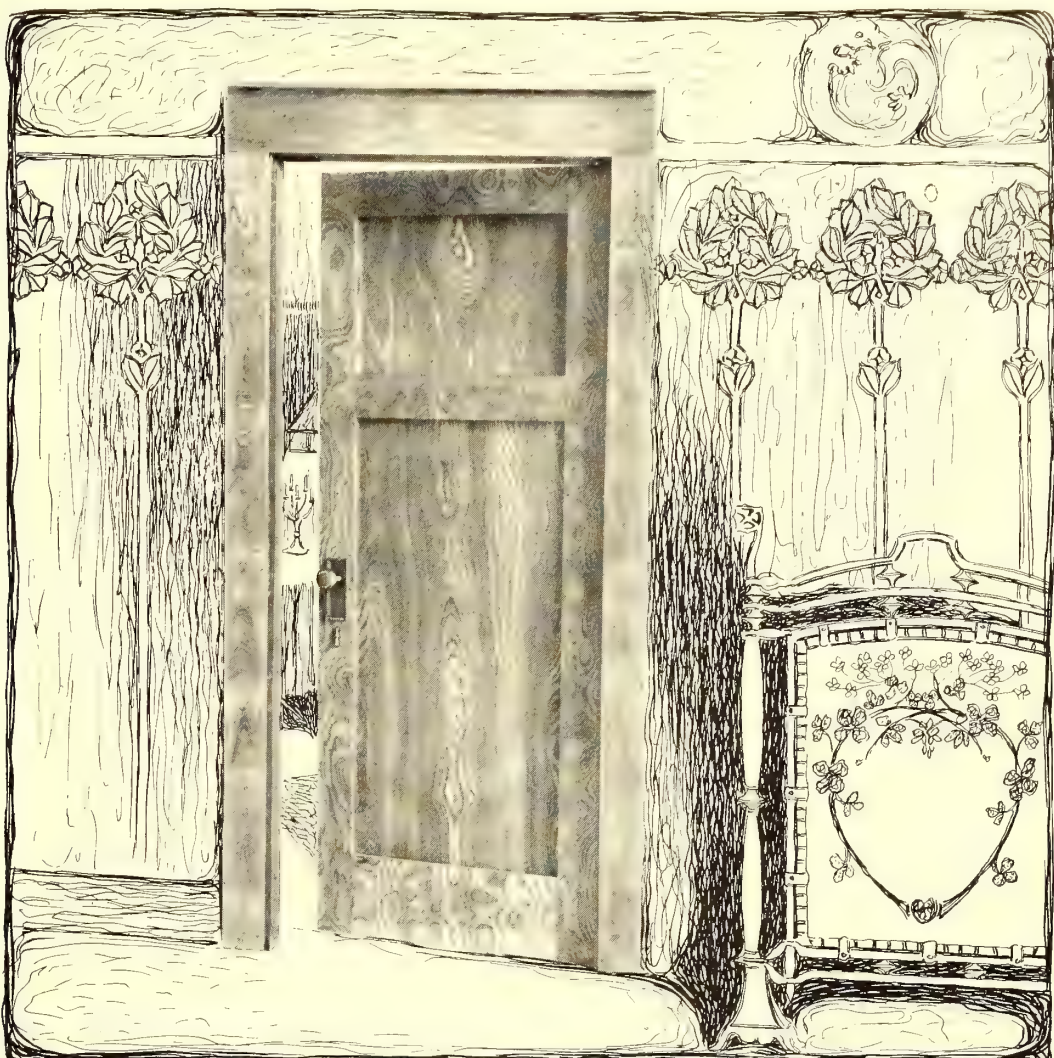
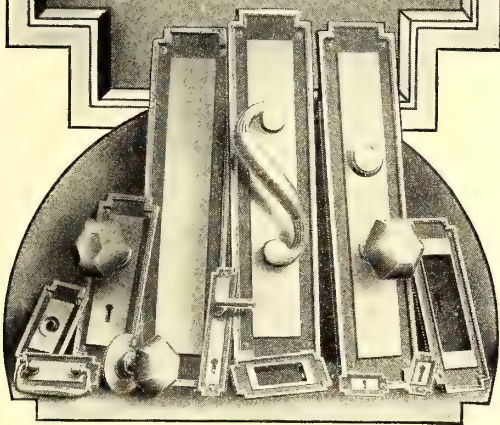
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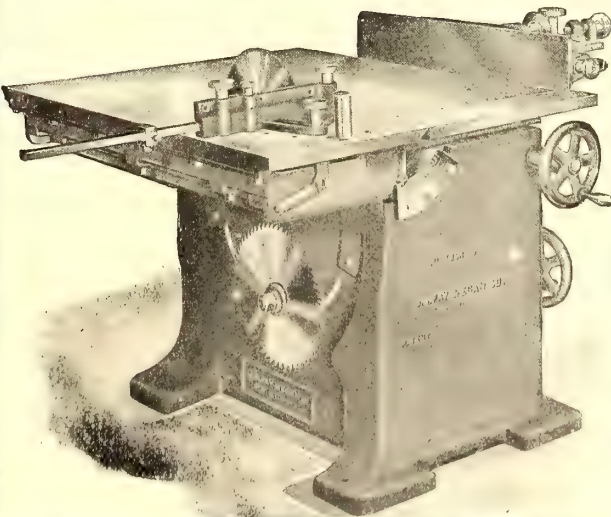
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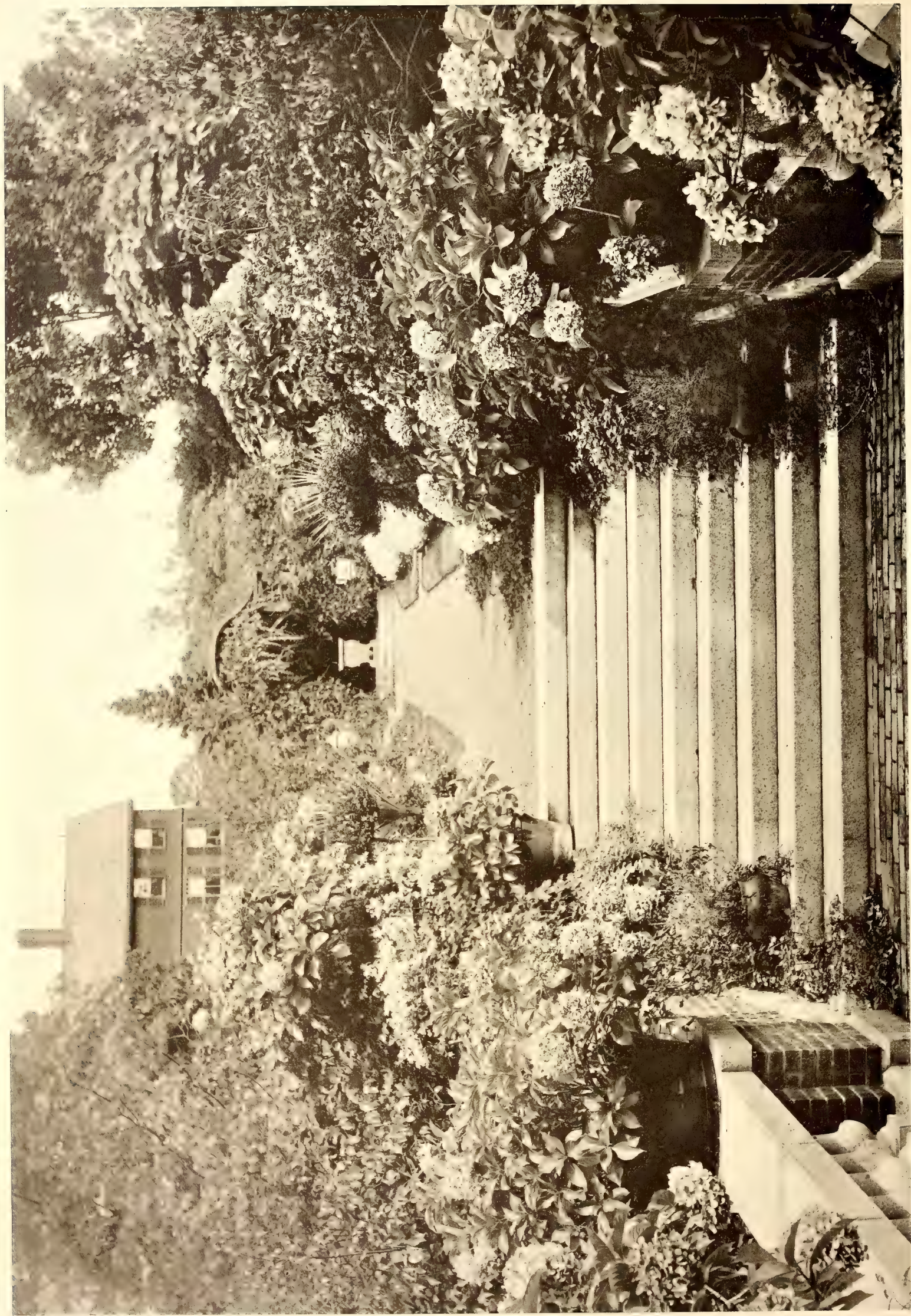
Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

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In the Garden of T. Jefferson Coolidge, Esq., Magnolia, Massachusetts. The Flower-bordered Bridge and Steps Looking Toward the Tea House



AMERICAN HOMES AND GARDENS



Volume IV

August, 1907

Number 8



"Pakeen," Rough Stone Steps Lead to Lower Levels in the Garden Path

Monthly Comment



IF GUIDES to country living there is an ample abundance. People who have moved out into the country and succeeded in winning a livelihood from the soil, or otherwise gratifying their ambitions, have recorded their experiences in more or less detail. Those who have failed have been somewhat more coy in putting their adventures into print; but even on this point there is a sufficiency of material. Apparently one has but to buy the right book, or subscribe to the right paper to find out all that one need to know on country life. Knowledge of this subject is before the public in generous form; it only remains to properly assimilate it and adapt it to personal uses. Yet notwithstanding the abundance of material and of information there are many subjects of vital importance to the newly arrived suburbanite and ruralite on which barely a word has appeared in print. Where, for example, will one find a stimulating, helpful, cheering and comforting chapter on the vagaries of railroad transportation in below-zero weather? Weather of this description is the commonest sort of phenomenon in the open country, even close to the great cities; yet railroads which have had it for years always greet it with the utmost astonishment and surprise, and without a single apparent step of necessary preparation. A book that would help the unfortunate suburbanite in such contingencies would not only find a ready sale, but, and this is much more important, greatly help in ameliorating the condition of a considerable body of the human race.

MANY parts of America are now disturbed over the increase in commutation rates on a number of important railroads. Here is a spick-and-span new topic that no one has yet had time to write about because no one ever thought so horrible a catastrophe impending. The commuter will inform you that there is but one point of view in this matter, and that is his own. It is true Governor Hughes gave this idea somewhat of a jolt in his famous veto of the two-cent-a-mile law; but the commuter still has much to say on this subject that can never find its way into print. But if anything of value could be said from that standpoint, it would not only be stuff editors and publishers should be falling over each other to obtain, but it would relieve many anxious souls, and shed a flood of happiness upon their lives.

AND this makes clear the point that what may be termed the psychology and sociology of country life is as yet almost unwritten. The material side of this fortunate form of existence has been well written about. There are countless manuals on farm and suburban life, telling you how to do almost anything, from sinking a fortune in it to obtaining a fortune from it. Of course, the latter books have the largest sales, and the journals devoted to that aspect of life have the largest subscription lists. But there can be no quarrel on this point. It is a fine thing to succeed in life; and if one can succeed in making a competency and more in raising cats, dogs, chickens, geese, ducks, goats, calves, sheep, horses, to say nothing of growing bush beans, strawberries, apples, cabbages, cauliflower, kohlrabi, brussels sprouts, kale, melons, currants and all the various fruits and vegetables that inhabit the countryside, either naturally or by importation and emigration—if one can make a success—a financial success—growing, cultivating, raising and marketing these products, and does so from book knowledge only and without any previous and costly experience, such a person is entitled to

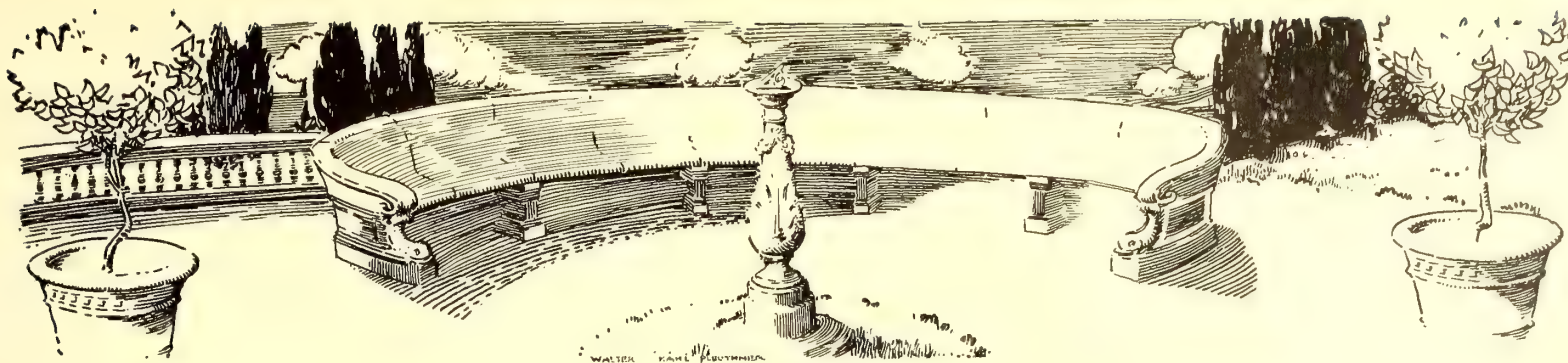
more credit that he is likely to receive in this world, and should rank among the heroes of achievement and of industry.

QUITE a book might be written on the purchase of rural real estate. Ordinary advice is, of course, quite available. Thus, even commonplace books will solemnly tell you not to buy wet land, but to seek out the dry spots; you will be told to examine and test the soil; to have regard to the winds; to study the crops of neighboring lands and other matters of great import, it is true, but still leaving much unsaid on such permanently abiding questions as the proximity of the former owner to the new. Or, what are the social relations, if any, between the old settlers and the new? The singular thing about old owners is that they are dying to sell, and then, having sold, wish they had not, or at least demanded more for the acres whose value has really been determined by the price paid by the purchaser. A very profound study could be written on this subject, and there is surely much interesting material relating to it abroad in the land, unknown, unrecorded and unrelieved. A book that would show how each party could be completely satisfied, or how each got the better of the other, would be a genuine "thriller."

ANOTHER wholly new and unchronicled subject is the relations the newcomer in a suburban region may find to exist between himself and the government authority of the district he has been rash enough to venture into. It is a popular belief that the Americans are a free and untrammelled race, every citizen being an independent sovereign of equal rank. As a matter of fact, we are a very much governed lot, with an assortment of styles, manners, modes and sorts from which there is no escape. Quite at the bottom of the heap is the government that is nearest the people. This has various names in different parts, and may be a borough, district, township or village government. Whatever the name, it has this in common: there is nothing below it but the people.

THE poor people! The lowest government is the most obnoxious because it is closest at hand and is concerned with the things that most affect the property owner. It fixes his taxes; it determines the kind and nature of the roads; it decides what part, if any, of his property shall be taken for public uses; it places the fire hydrants; it provides the schools; and it attends to the many little matters that are necessary or unnecessary to existence. And, of course, such a government may be a very painful government, doing all sorts of things in the name of the public which the public may not desire, and inflicting many an unexpected hardship and injury where none was expected.

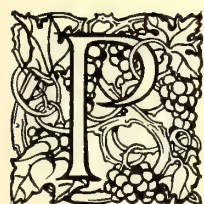
THE newcomer stands small chance before the awful majesty of this petty government. It hovers over the land like a gigantic bird of prey seeking the innocent and the unwary. The old timers have either been plucked, or, for reasons of policy, if not of state, are better left alone. But the newcomer is grist for every mill. The countryside awaits him with joy. The butcher and the grocer hoist their prices because he is new or because he does not buy as much as they think he ought to; his taxes are put as high as prudence and poor guesswork permits; and then the government, righteously clad in a garment of law, proceeds to administer to the unfortunate and helpless victim a variety of things that, at least, do not add to his peace of mind, nor help to satisfy him with the state he has rashly committed himself to.



Notable American Homes

By Barr Ferree

"Pakeen"—the House of Samuel Cabot, Esq., Ponkapoag, Massachusetts



ONKAPOAG is but thirteen miles from Boston by the railroad. Presumably, therefore, it is quite within the pale of metropolitan influence. Certainly the traveler from a distance is justified in assuming—if railroad time tables count for anything—that Mr. Cabot's house is quite close to Boston, and that whatever its other characteristics may be it is certainly not distinguished by remoteness of situation. As a matter of fact, one only reaches the nearest railroad station to immediately leave it for a long drive into the adjacent countryside, a drive so prolonged and through such beautiful country that I have no idea whatever as to the location of the Cabot house, nor can I tell whether it is near Boston or not, or even so much as remotely influenced by Boston proximity.

The journey thither, while it takes some time, is not without many compensating advantages. One loses the New England metropolis gradually, stopping at frequent intervals, doubtless with the intention of accustoming the traveler to the difference between Boston itself and its immediately adjoining suburbs. So numerous are the places at which the train pauses that one has almost forgotten Boston on arriving at the station. The carriage presently leaves the

highway and turns off into a country road, whence the journey is continued to so great a length that one has serious doubts as to the knowledge of the driver. One is almost immediately lost in the true country, with broad fields and distant hills and woods, which the road approaches closer and closer, until one is in a true woodland—trees to the right and left, trees to the front, trees behind. The road is so thickly covered with pine needles that the thud-thud of the horse's hoofs is muffled, and the atmosphere is laden with the sweet odor of the pine woods. Scarce a house is to

be seen, and the restfulness and quiet of the real country—the country that is nature still holds supreme sway and the handiwork of man has made barely an impress—all this penetrates one with a delightful sense of peacefulness.

Presently you arrive, for far off on the left is a stable you instinctively know belongs to an estate of some magnitude—a stable of some size, with a coachman's house on one end, a high white central arch in its shingled walls, a green stained garage behind it. The entrance road climbs a gentle hill, and there you are before the entrance portico!

And a most delightful and agreeable house it is: a long, low dwelling of stucco, colored French gray, with white trim, and pale blue-green shutters. The front wall is so



The Entrance Portico Is Supported by Doric Columns



The Dining-room Has a Flat Groined Ceiling with Paneled Walls in Buff with White Stripes
The Floor Is Laid with Moravian Tiles



The Fireplace of the Living-room
and Lined with

nearly flat that one hardly realizes that, after all, the center is slightly recessed, and the two ends as slightly projected. The change of the surface, in fact, is not more than sufficient to vary the modeling and give texture to what otherwise might be a rather unduly long wall. It is a two-storied house, with a low, flat, sloping roof, whose eaves constitute its crowning feature. On the left the wall is once more slightly recessed, and rises above the main roof. On the ex-

treme end a lower structure, one story in height on the outer wall, two within against the house, is applied to the main building, and forms a part of the service wing. The graceful curves of its side walls are delightfully drawn, and add a real note of picturesqueness to the whole front.

The entrance porch is a simple little portico of two Doric columns supporting an entablature, above which is an iron railing to the upper balcony. The main wall is cut away on



The Stairs Rise at One End of the Hall and Have a Wrought Iron Railing of Simple Design



The Loggia on the Inner Front Has R
Ceiling; It Is Pav



Wood, Painted White, Faced
ed Brick



The Living-room Is French Gray with White Trim. The Curtains Are Buff
Linen with Floral Borders

each side, and has square piers and pilasters inserted, with a very slightly detailed entablature. The wall is again recessed for the single window contained in each of these spaces. While the window treatment of the front is apparently regular, it contains some interesting evidences of irregularity. All the windows have plain, narrow frames. The two on the right of the entrance are regularly disposed in both stories. In the center of the second story are three

windows; the middle longer than the others and opening onto the balcony before it; the other two, one on each side, being similar to the other windows of this story, but having solid mullions dividing each into two. On the left are two large windows, spaced without reference to the other windows of the front, and each with its own wrought iron balcony. One presently discovers, on entering the house, that these light the stairs to the second floor.



Plastered Walls and a Semi-vaulted
with Red Brick



The Hall Is Floored and Paneled Throughout in Walnut; the Hooded Mantel
Is Faced with Red Brick



The Dining-room Has a Flat Groined Ceiling with Paneled Walls in Buff with White Stripes
The Floor Is Laid with Moravian Tiles

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The Fireplace of the Living-room Is Wood, Painted White, Faced and Lined with Red Brick



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The Stairs Rise at One End of the Hall and Have a Wrought Iron Railing of Simple Design



The Loggia on the Inner Front Has Rough Plastered Walls and a Semi-vaulted Ceiling; It Is Paved with Red Brick



The Hall Is Floored and Paneled Throughout in Walnut; the Hooded Mantel Is Faced with Red Brick



The Simplicity Which Characterizes the Entrance Front Is Equally Marked on the Inner Front

The inner front of the house is designed in strict harmony with the entrance front. Once more there is the long, low stretch of wall, with the higher building at the further end. But the recessing here is the opposite from what it is on the first front. That is to say, the center is now slightly projected, while the ends are as slightly recessed. In the center of the first story are five great arched windows opening onto the steps by which the terraced lawn is reached, each shaded by a green and white awning, which adds much to the color scheme of the front. Again there is a very low flat roof, relieved only by the chimneys, of brick, painted white. The central window of the second story has a segmental arch and the single balcony of this front.

The hall is a long rectangular room, occupying the whole of the center of the house. It is L shaped in plan, the extension on the right containing the stairs, which adjoin the entrance front, and which have a wrought iron railing. It is paneled throughout in cypress, in small rectangular panels, interrupted only by the pilasters of the two great doors and the frames of the windows and lesser doorways. The floor is of the same material, with Oriental rugs, and the plain ceiling is white plaster supported by a cornice, which is a portion of the surrounding wainscot. The hooded fireplace on the right is wood, with red brick facings. The furniture includes some fine carved chairs, while others have brown leather coverings.

The great door opposite the entrance door admits to the loggia on the inner face of the house. It is completely inclosed within the house lines, being lighted by three of the large round arch windows of which mention has already been made.



The Entrance Front Is Long and Low, with a Modest Portico and Severe Treatment of the Detail

The walls are of rough French gray plaster, developed into a vaulted ceiling with a flat center. The floor is laid with large and small red bricks. The furniture is chiefly in wicker, with green and white cushions. On one wall is let in a large tile picture of the Parting of Columbus from Ferdinand and Isabella, being a copy of a sixteenth century design. Plants and vines, growing in tubs and jars, add to the agreeableness of this beautiful porch.

The living-room fills the entire right end of the house, and is lighted on three sides. The wood-work is white, and consists of a low wainscot, pilastered frames to the windows, and the cornice. The plain upper walls are toned a French gray, and are papered with Japanese paper. The plain ceiling is white. The window curtains are of buff linen with floral border, and are lined with white. The fireplace is wood, painted white, and lined and faced with red brick. Above the mantel is a mirror with an old Italian painted frame. Opposite the entrance is a triple window, the centermost of which opens onto a small porch, by which the formal garden is reached.

The library is a small square room adjoining the loggia on the inner front, and is entered directly from the hall. The walls are colored blue, with a narrow walnut base and cornice. The mantel is of walnut, brick faced, and the ceiling is vaulted and left white. The room is lighted by two round arched windows with nickel and brass mounts and ecru curtains.

The dining-room is on the left of the hall, and opens onto the inner front. It has a floor of Moravian tiles, on which is an India drugget with a zigzag border in reds. The white ceiling is very



Low Stone Terrace Walls Are Everywhere Characteristic of the Grounds Immediately Adjacent to the House



At the Entrance Is a Forecourt Formed by the Projecting Wing and the Enclosing Terrace

flatly groined and vaulted. The walls are paneled in dull buff with white moldings. The Caen stone mantel has a brick lining. Artificial light is supplied through silver side lights. The furniture is old, including Chippendale chairs with brown leather coverings. The window curtains are green and buff chintz. A large sideboard provides space for a charming collection of old china. It is a room of admirable charm, beautifully adapted to its uses.

Interesting as Mr. Cabot's house is in itself, the beauty of the surrounding grounds adds very much to its attractiveness.

The inner front overlooks a beautiful grassed terrace, spacious enough to give the house a fine setting of green on this side, and bounded on the outer limits by a low stone wall, beyond which is a thick forest extending apparently indefinitely.

There is no floral planting here, which has been more particularly reserved for the garden arranged beyond the living-room. A window-door gives immediate access to the grounds, admitting one first to a grassed terrace, and then to a long path that stretches straight away into the distance. At

first this path is grassed, with stepping-stones of red brick, bordered on each side by growths of cedars and other evergreens. Then it merges into a broad path of ground stone. On each side are tall cedar poles, covered with roses and connected at the tops with chains. Below grow lilies and iris, with rose beds beyond, all within a bounding hedge. Then stone steps to a lower level, with brilliant flower beds of annuals and perennials beyond the grassed border, and finally two large Italian jars stand at the opening of the circle with which

the garden is closed. The borders here are luxuriantly planted with flowers, peonies, nicotiana, lilies, foxgloves, hardy phlox, cosmos, Japanese anemones, hollyhocks, and similar plants. There is a hedge all around, and beyond and below are cedars, tall and dark. Nothing could be simpler in idea than this flower-lined path, inclosed, on its outermost limits, by a hedge, ending as it does in the great circle which incloses it; and yet few more elaborate gardens are finer in idea, finer in effect, or more beautiful in result. A winding path from the circle leads down on one side to the tennis court, situated

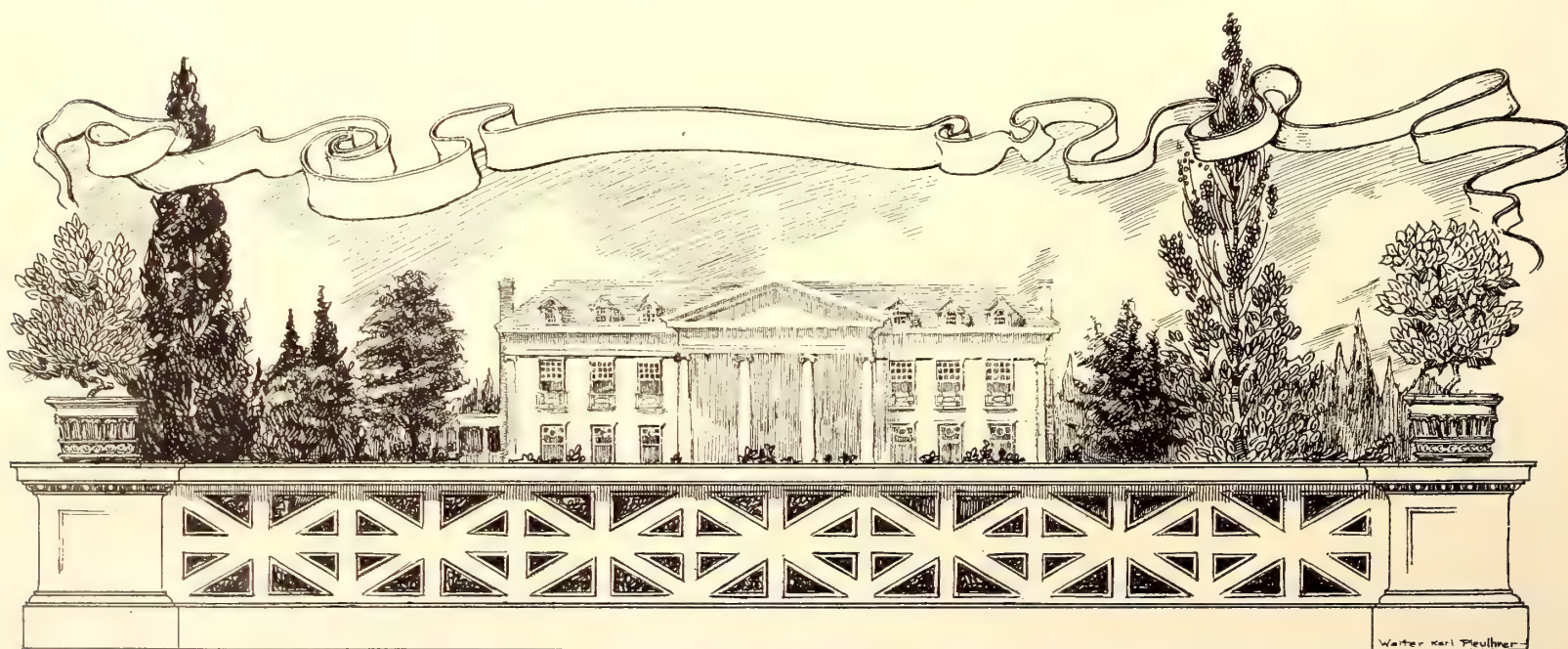
in the wild grounds that border the garden on both sides.

The floral planting around the house is actually begun at the entrance front, where a small forecourt has been created by the low stone wall that bounds the entrance space; here are grass borders, with shrubbery against the walls, while a pair of white pine trees in the middle of the central area give a delightful shade and color to the whole entrance. The kitchen yard is well concealed to the left, and the ground above rises sharply and is covered with forest trees of beautiful

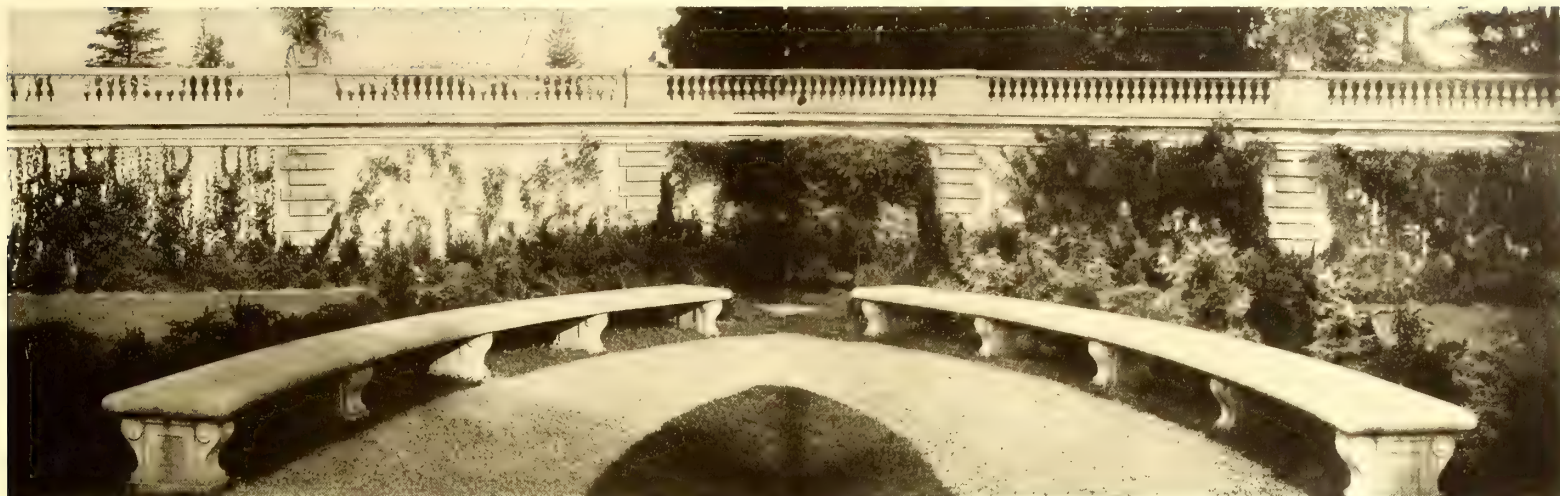


The Floral Path Ends in a Vast Circle Beautifully Bordered with Hardy and Annual Plants and Enclosed Within a Hedge

growth. And the situation of the house is one of the utmost beauty. Whether Mr. Cabot has near neighbors or not I do not know, but certainly none near at hand can be discerned from any viewpoint within immediate vicinity of his home. It is built in a true tree country, with trees everywhere, save exactly where the house stands. The outlooks are through trees and above trees, with tree-covered hills reaching to the furthest distance. It is, in truth, an ideal spot for the true lover of the country.



Walter Karl Pfeiffer



Concrete Garden Benches of Graceful Design Follow the Outline of the Curved Path

Cement and Concrete in the Formal Garden

By Phebe Westcott Humphreys



EMENT casting and concrete construction, from being mere curiosities, have gradually become familiar necessities in the formal American gardens of to-day. For the cement castings various experiments have been made to render the material durable and to give it a certain hint of color for garden urns and vases for balustrades. As the majority of the sands that are mixed with the cement have not sufficient color in themselves to effect it, "mortar-color" is frequently added. But in the concrete used for outlining and walling formal gardens, providing coping for fountains and substantial garden-benches of graceful design, no attempt at coloring is made; the gray and bluish tones of the natural mixture having proved entirely satisfactory in the formal-garden designs

without the addition of coloring-pigments of any sort.

Garden-decorators from across the water tell us that "in the land of its invention, Portland cement is now used for whole buildings, monuments, sea-walls, fountains and bridges. Kilometre posts measuring roads on the Continent exhibit the material which went into the highway itself. In France and England it is employed so cleverly at artificial-rock gardening as to call forth admiration of the thing imitated." In America the uses of cement are daily extending in the building of bridges and houses, and seemingly in every form of constructive work on a large scale; and it is difficult to say how much more rapidly it would extend in completing decorative garden features, if satisfactory variations in texture and color were practicable without impairing cohesiveness and consequent strength.



Mammoth Garden Urns



A Corner of the Sunken Garden



The Statue of Spring in a Fountain Pool

Probably the best example of the extensive use to which it is attaining is evidenced at the Ashbourne country seat of Peter A. B. Widener, Esq., with its rarely beautiful formal gardens. Beautiful garden-marbles have been introduced in these formal gardens in connection with the cement castings and the durable concrete constructive work; but there has been no attempt to display antiquities. This is the mistake too frequently made in the decorative features of formal

In the formal gardens of suburban Philadelphia, especially those connected with the country seats of Germantown, Cheltenham Hills and Ashbourne, the use of cement in constructive and decorative work is especially notable.

American gardens. In connection with the most modern methods of introducing concrete walls and boundaries with distinctly modern-looking but graceful designs in concrete garden-seats, there will be added numerous for-



A Sunken Garden Rich in Design and Effective in Ornamentation



A Central Fountain Statue of a Sunken Garden

eign marbles, supposed to possess additional charm from their antiquity. Among these will be found curious wall-fountains and old tree-tubs, with figures in relief. Ancient flower-

jars and quaint well-curbs, Italian Renaissance fish-basins, huge French vases, an antique sarcophagus, with drain-holes drilled in to form a plant-holder, stately garden-urns of Italian design and elaborate benches—all displaying, if possible, the charm of the antique. In fact, so great has become



Statue of Autumn in the Fountain Pool of a Sunken Garden



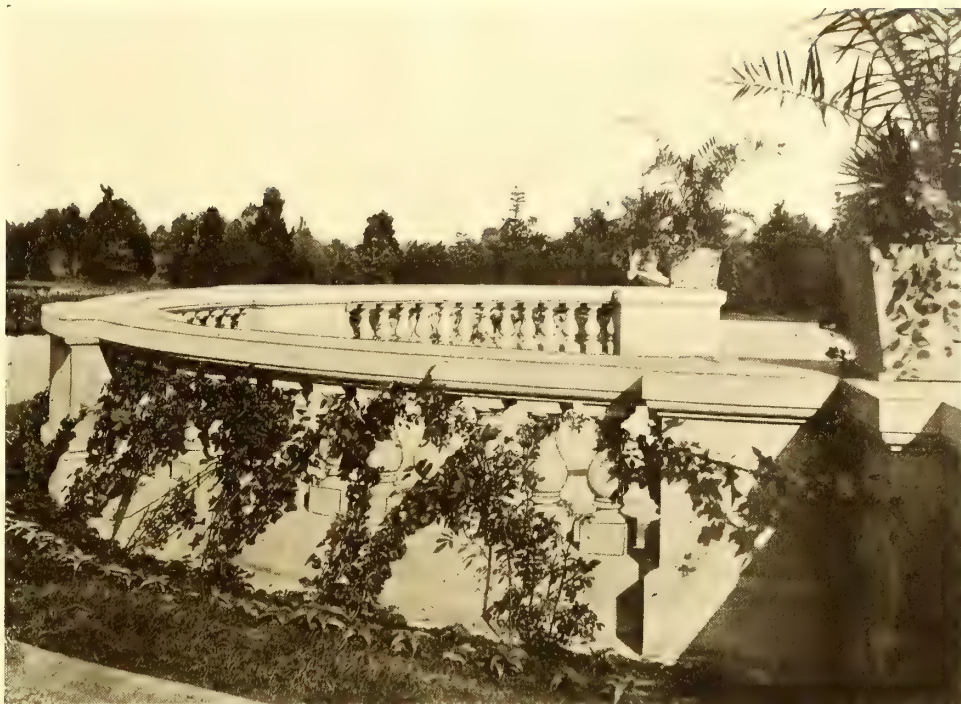
A Handsome Balustrade Surrounding a Sunken Garden. A Good Example of Concrete Work

this demand that a contemporary authority has written:

"Passionate collectors of antiquities, and affecting when they do not cherish it an enthusiasm for antique life, they have made their gardens veritable museums, even at last counterfeiting antique ruins on their estates. The whole thing has reduced itself to a question of commercialism. People that can afford to pay two or five or eight thousand dollars for a garden-ornament are numerous enough to absorb all that offers, but not to keep the machinery of the average antique establishment running at full power.

"Far larger is the public that wants to get its antiques, 'new and old,' at low prices. Suppose one finds that a font or basin, that looks of immemorial age to the uninitiated, may be bought for one hundred dollars, will he not be tempted? If he be a sudden and ill-prepared aspirant for garden honors, it is not difficult to fancy him writing his check, and ordering the plausible object set up in his domain. He is but the modern instance of a counterfeiter of antique ruins. The blame is not to be laid wholly upon the bargain-hunter's shoulders. The original sin was committed, in nearly every case, in Italy itself. Antique designs are more or less faithfully copied, the very chips and gouges of three hundred years of existence being reproduced as nearly as possible, elaborate care being taken to rub down corners and break off projections, as though the weather and the petty accidents of centuries had left their scars. The next step is one that stamps the practice as indefensible. Diluted acids are poured over the stones to eat away the surface in irregular patches, in imitation of decay. Finally the calendar is put back for it, by rubbing the marble in damp earth and thoroughly impregnating its skin with a dingy color. For the result there is, of course, only one word. That word is counterfeit."

It is not surprising under these conditions that those who could afford the genuine antique, and even those who have a passionate love for the genuinely old Italian marbles, will sometimes avoid the real because of the counterfeits. There is little probability, however, of this form of garden decoration being entirely discarded in formal landscape gardening. It is too widely appreciated to be denounced as a whole, because certain ambitious estates display imitations. To be pleasing and effective all antique garden ornaments must be well proportioned, harmonious and fitting to their surroundings—in other words, both appropriate and impressive—or they will fail to satisfy, no matter how "genuine and beautiful" they may be in themselves. In many of the most beautiful of the formal Americans gardens of to-day a few fine marbles are introduced in the form of statuary and mammoth garden-vases, but no pretence is made to have the rarely beautiful formal garden other than it appears to the admiring observer.



A Semi-circular Wall of Concrete with an Outer Border of Climbing Roses



The Architect and the Gardener Have Been at Work Ever Since this Mansion Was Built

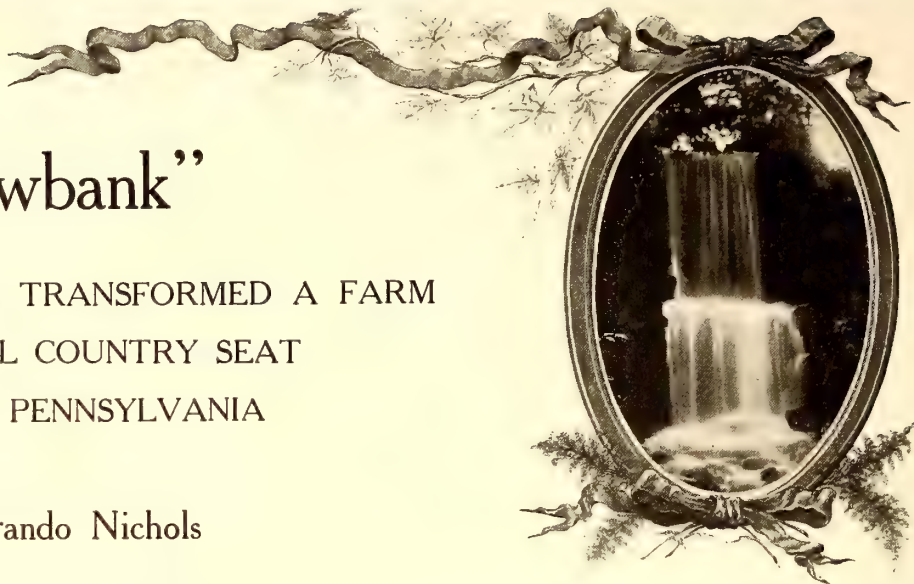


A Lower Wall with an Attractive Fountain Recess, Extending Back Under the Upper Pavement

"Meadowbank"

HOW CLINTON GAGE, ESQ., TRANSFORMED A FARM
INTO A DELIGHTFUL COUNTRY SEAT
AT VILLA NOVA, PENNSYLVANIA

By Francis Durando Nichols



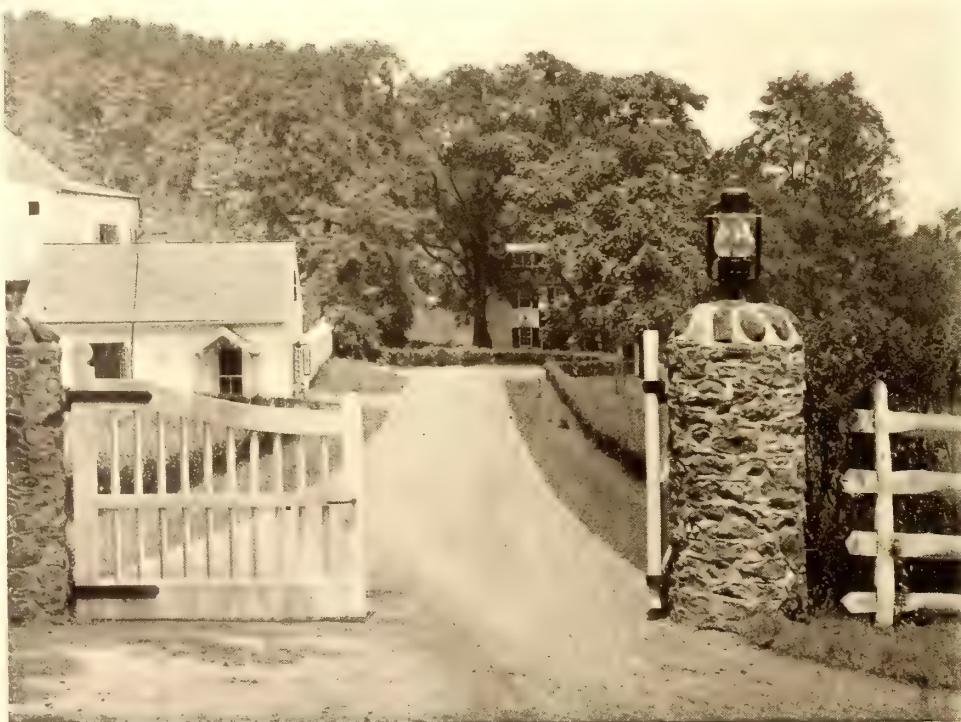
SOME two years ago Mr. Gage found at Villa Nova, Pa., an interesting old farm, with a quaint old house and farm buildings surrounded with run-down farm lands. The character of the place, so isolated in aspect, and yet within close proximity to the city, appealed strongly to Mr. Gage, and so he purchased it, and subsequently transformed it into a delightful country seat, which the photographs presented herewith illustrate.

The entrance to the estate is ornamented by field stone posts laid up in a rough manner, from which posts swing white gates. Another attractive feature is the whitewashed split rail fence which surrounds the estate and carries out the character of the old-time farm. A straight road enters the place, passing by the servants' quarters and farm barns placed at the left, and on to the circle from which an entrance to the house is obtained. The house rests on the side of a hill, overlooking the meadows below, from which it gets its name, and on across to the hills. When Mr. Gage found this house it was typical of the old-time farm-houses so frequently seen along the country highways of Pennsylvania, but fortunately of such a character that the form of the buildings and grounds could be maintained, thereby reducing the problem of its transformation to a slight alteration, combined with a thorough renovation bringing the whole property to its proper condition. The house was too good to be torn

down, and if it had been replaced by a more modern building it would certainly have lost the charm which it now possesses, standing under the shade of the fine old elms and walnut trees with which the place is surrounded. With the exception of the roof being broken and raised, the main lines of the house remain unchanged, and the problem presented to Mr. Gage was confined to a cleaning up, as it were, and the place put in a sanitary condition.

The entire absence of ornament, and solidity and permanence of the walls of the house, which were of stone, made it desirable to keep the building intact; and the only necessary repair was to apply a coat of rough stucco and then a coat of whitewash. The blinds were painted bottle green. The only ornament added to the house is the quaint little "Bambino," with which the outer wall is pierced and which was brought from an old house in Italy by the present owner; its dull green color adds a quaint touch to the whitewashed walls. The house, in its origin, was built for one family, and was only one-half of its present size, with a

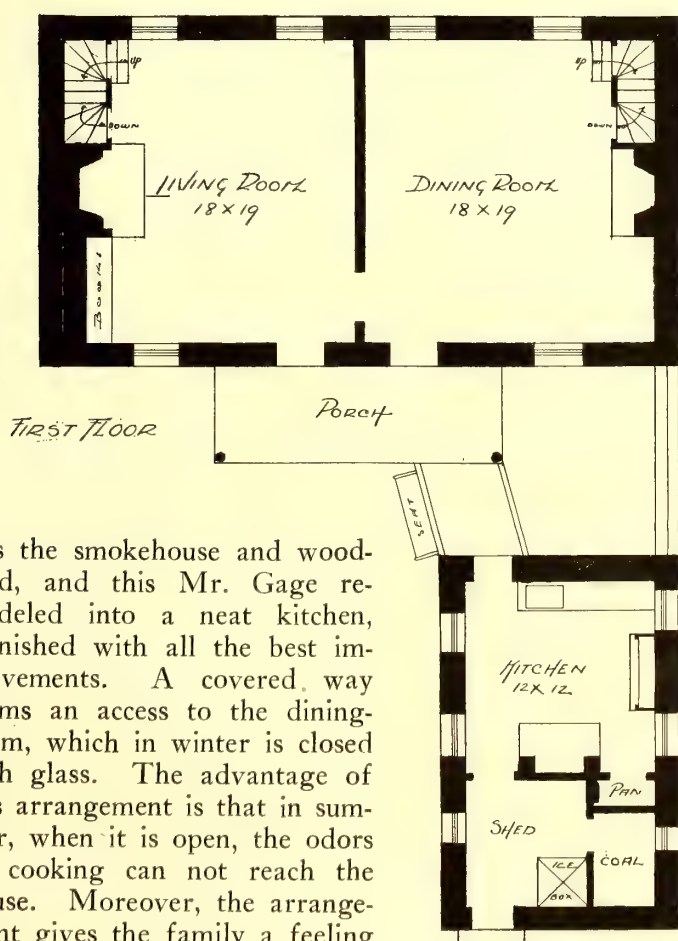
kitchen on the first floor and two bedrooms on the second floor, reached by a staircase from the kitchen. When the master's son "John" married, the end of the house was pushed out and a duplicate of the original house was built to accommodate "John and his family." This was what Mr. Gage found when he examined the house. He remodeled one kitchen into a living-room, cut a door into the other kitchen and turned that into a dining-room. Outside of the kitchen door



The Entrance to "Meadowbank" with Its Stone Posts and White Painted Gates

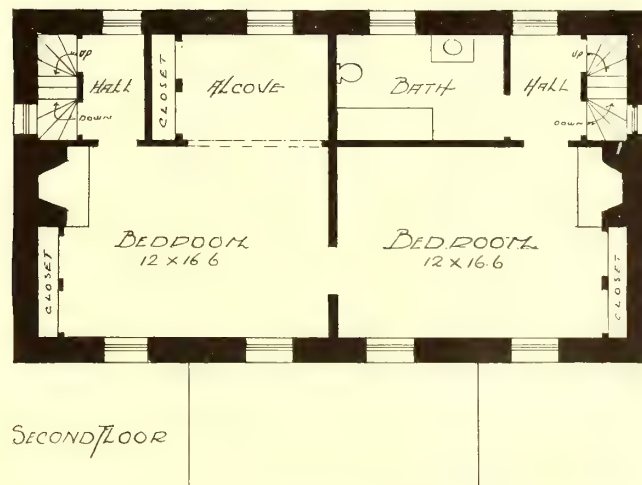


The Old House was Maintained by Plastering the Exterior Walls and Coating Them with Whitewash



was the smokehouse and woodshed, and this Mr. Gage remodeled into a neat kitchen, furnished with all the best improvements. A covered way forms an access to the dining-room, which in winter is closed with glass. The advantage of this arrangement is that in summer, when it is open, the odors of cooking can not reach the house. Moreover, the arrangement gives the family a feeling

of isolation. The great kitchen of the original house, which was the living-room in early Colonial times, was the center of family life. In this room, enlivened by the glow of a great open fireplace, from which huge cranes hung with steaming pots, the food was cooked; here, too, the table was spread



The Plans Underwent Slight Changes

for dinner, and it was here after the day's labor had ceased that chairs were drawn up in front of the great blazing logs in the fireplace for a quiet evening, and that the corn was popped and the apples were roasted by the young folk, while the elders either slept or chatted about the news of the day.



An Old Crane Swings in the Fireplace of the Living-room in Colonial Fashion

The fireplace in the living-room was built out and faced with rough stone laid with wide mortar joints and the whole finished with a neat wooden mantel. The hearth is laid with red brick. On one side of the fireplace bookcases have been built in. The fireplace in the dining-room was left in its original form, and finished with a single mantel and a row of shelves at one side. The woodwork of both rooms was painted a dark bottle green, while the walls were tinted in harmony, with a lighter shade of green.

The second floor is treated in the same manner, except that the walls are tinted buff. It contains two bedrooms and a bathroom. One of the original bedrooms was transformed into an alcove and the other into a bathroom which is furnished with porcelain fixtures and exposed plumbing. The third floor, which is reached from two stairways, one on either side, contains two bedrooms, and a bath and a trunk room.

A cellar under the entire house contains a heater, fuel rooms and cold cellar. The kitchen, which occupies the old smoke-house, is furnished with a sink, laundry tubs, dresser, store pantry, and range placed into the old smoke fireplace. Beyond the kitchen are the fuel rooms and the shed, in which the icebox is placed.

A feature of this estate is the servants' hall and lodging rooms, which are contained in the quaint little building which is passed along the drive on the way to the house, thereby isolat-

ing the domestic part of the house entirely from the house proper. This building is built of stone and whitewashed. The boarded entrance and the quaint latticed windows are decided architectural attractions. On the first floor there is placed the living-hall and one bedroom and bathroom. This living-hall is open to the roof, and a staircase out of it rises to the second floor, which contains another bedroom.

The living-hall is painted green, with tinted walls, while the remainder of the interior is painted white. The bathroom is fitted up with porcelain fixtures and exposed plumbing.

The old frame barns were placed in good repair and were given a coat of whitewash. The grounds were laid out with gardens,

both vegetable and floral; trees were planted here and there, and shrubs were clustered in groups about the various corners, wherever they were required, until now the place is pervaded with that delightfully restful atmosphere which is so refreshing to the tired business man.

Peacefulness and quiet are, indeed, the most attractive and the most valuable qualities of the country house. There must, of course, be convenience and adaptation to modern needs, and these differ widely from the essential characteristics of the old time house. But the old time house is very far from being a "back number" or unsuited to readaptation



Green Painted Trim, Green Tinted Walls, and Simple Furniture Characterize the Dining-room



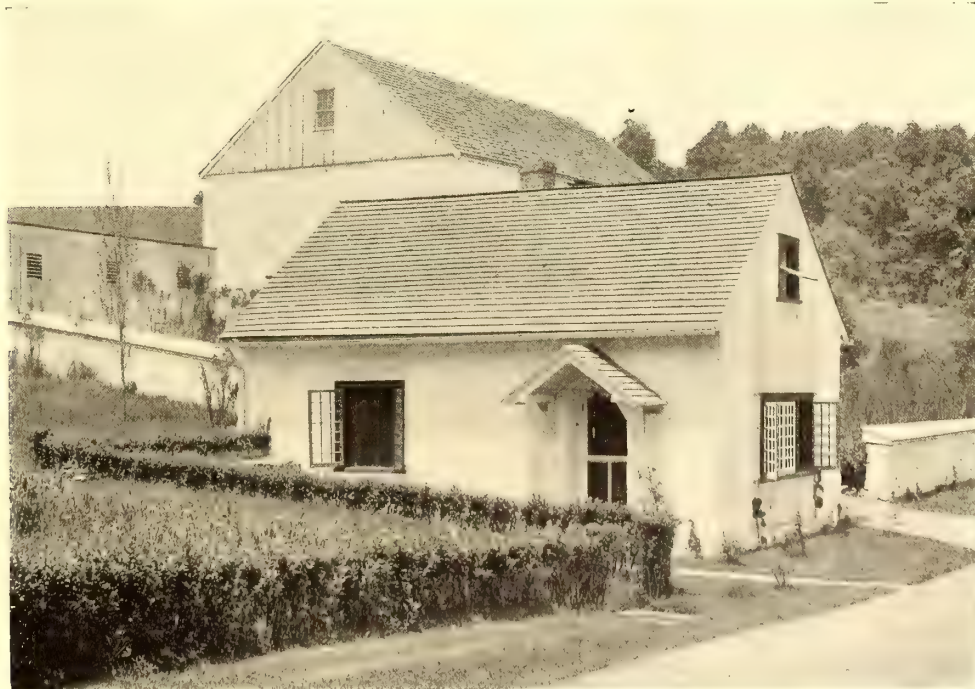
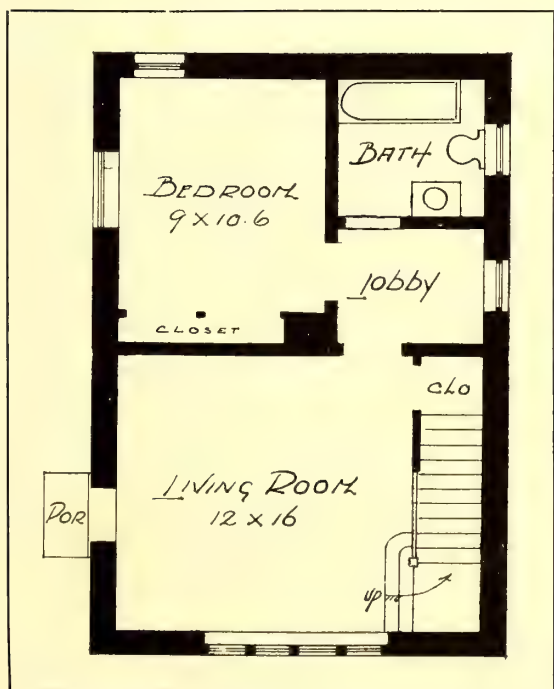
Quietly Resting Under the Spreading Trees Is the Old Farm House, from Which Broad Vistas Are Obtained of the Meadows

to modern requirements, and Mr. Gage's renovation of his house at Villa Nova is a fine illustration of this very point.

The charm—the architectural, artistic or building charm—of an old house is an undeniable quality of attractiveness which many a spacious, costly modern dwelling wholly lacks. It is the distinction of old age that wins one's admiration, and no building can acquire this fine characteristic save by age itself. The vaunted superiority of the new house is apt to be thoroughly superficial, a mere veneer, as it were, on a foundation by no means too extensive. If need be, much of this veneer can be applied to an old house, which may thus obtain the combined advantage of the beauty of old age with the

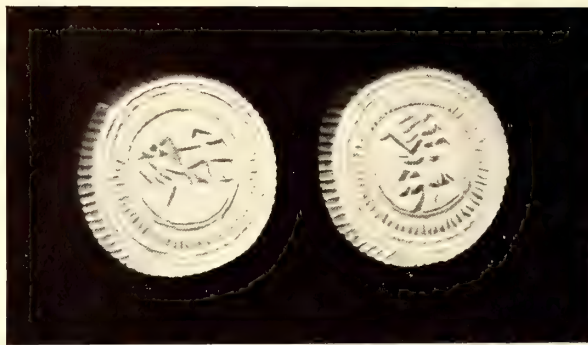
excellence of modern conveniences, and all they imply.

For the conveniences must not be forgotten. No building is a fit habitation that fails to meet the personal requirements of its owner, however whimsical those requirements may be. Our ways of living, our life, the matters that make up life, and the methods of housekeeping which are now in vogue are so thoroughly different from those of our forefathers, that only by complete renovation can an old house be adapted to modern needs. This, however, and most fortunately, need not be an outward renovation, nor even a radical one, but simply one that brings a long-used structure up to date in a manner compatible with fine old age and good modern usage.



The Servants' Hall and Quarters

Curiosities of the Chinese Table



Chinese Snow-white, Intensely-sweet, Rice-flour Tea-crackers

Dried and Curious Edibles

By L. Lodian

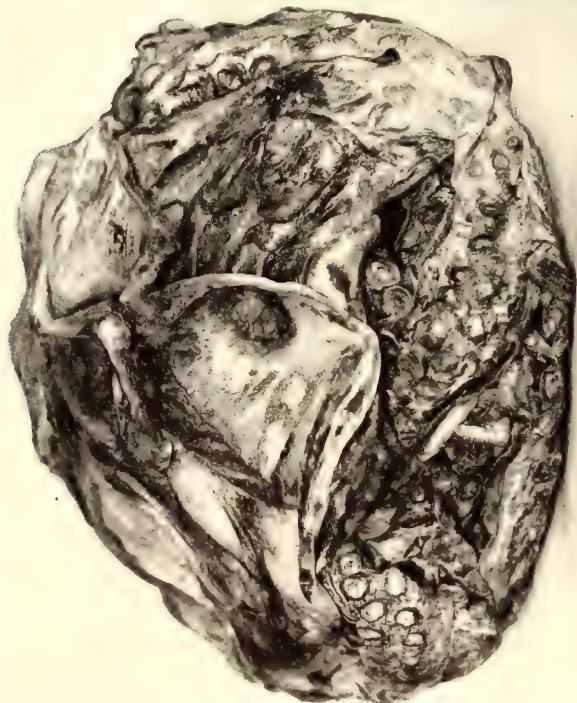


HE shark's fin is a great delicacy to the Chinese epicure. At one time, ages ago, sharks used so to infest the Chinese coasts, on the lookout for "titbits" in the way of bathers, that the coastal folk dared not venture far from shore single-handed. Then one of the mandarin gourmets discovered that the shark's fin is a peculiarly appetizing morsel. It promptly became "the rage"—and has so continued to this

jet black all through and retail at from \$1 to \$1.40 per pound. They are unsweetened and they taste much like an unsweetened American biscuit.

Dried oysters are a much prized delicacy. They have considerable "substance" in them—more than one would think. A dozen of them, with bread, will make a fairly "square" meal. To dry, the fresh oysters are simply soaked in brine, then sun-dried. They can be eaten raw or cooked.

The Chinese also put up a so-called "oyster oil" in cans



Dessicated Giant Cuttlefish or Devilfish (Called by the Chinese "Ocktopus"), a Most Esteemed Food. Note the Shrunk Suckers



The Celebrated "Sam-ce-che," or Sun-dried Shark's-fin, of the Chinese

day—the price ever mounting; fishermen pursuing the shark instead of its pursuing them. The result is that the fish has been almost exterminated. Long journeys must now be made through the now sharkless offings in search of it, and the price ranges from \$5 to \$6 per pound. The specimen illustrated, for instance, being a particularly fine piece, weighing $\frac{1}{2}$ pound, cost \$3 in United States currency.

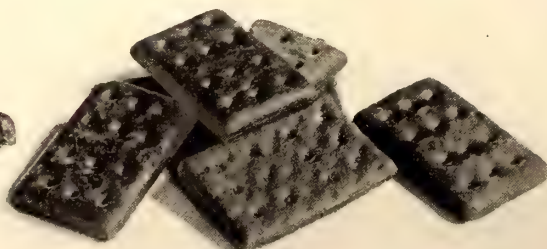
To cook, the fin requires a couple of hours' soaking, then a couple of hours' boiling. The blade of the fin is the juiciest portion.

Among other delicacies of the Chinese table may be mentioned the black tea crackers, which are

It is so heavily salted, that the receptacle is usually one-third full of the settled salt. There is really no "oil" in the can. The contents consist simply of the squeezed-out concentrated juice (plus the sodium) of entire semiputrescent oysters;



Sun-dried Chinese Oysters



Jet-black Chinese Unsweetened Tea-crackers



Chinese Chestnut-flour Macaroni, a Most Nutritious Food

these are dingy brown in color and are used as a curry.

Famous the world over is the Chinese birds' nest soup. The twigs from the edible birds' nests cost from \$1 to \$10 per ounce, so that it is the dearest food known to man. The nests are not found in China, but are imported from Java. If you are familiar with the taste of cooked blood albumen you can surmise the taste of these edible birds'-nest twigs plus the taste of dried cherry tree gum and stale bread crumbs thrown



Sun-dried Chinese Compressed Seaweed Mat, Used in Soap-making, Etc.

in. I hardly believe it has any more nutritive properties than calf's foot jelly or beef extracts.

The birds'-nest twigs can be cooked without previous soaking, although it is the practice of good cooks to soak them for days. They retain their form (like high grade macaroni), although swelling to about double their size, after an hour's vigorous cooking; this is proof of their purity, showing

freedom from adulteration. As a matter of fact, it has never been found practicable to imitate or provide a substitute for this singular product of the saliva of the Java swift bird.

In China tea is not only drunk, but also eaten. A most palatable salad is made from the leaves. The salad is made from the exhausted full leaf of the biepjcki-chai (virgin tea)—the entire pure unfired leaf—the same tea you drink in another crumbled form, the *débris*. After the silk-tied little bunches of pure tea have done duty in the teapot they are lifted out by the silken thread intact and suspended in a glass vase full of water-white vinegar for a fortnight. They are then ready for the cold meat lunch table. They make the most exquisite and rarest of salads. Only the tender leaves are edible; the stalks are thrown aside.

Another delicacy is the cuttlefish, which appears mostly on the table with rice dishes. The fish itself is caught for two important reasons—for its sepia or ink-bag, from which is derived the permanent China or India ink of commerce, and for food. It is perhaps the most solid and satisfying of fish foods. Unfortunately, it is quite a gritty food, the fine sand which has been drawn into its thousands of suckers being almost impossible to wash out.

Strawberries with stones! Such is the peculiarity of the Chinese white strawberry. As it is seen growing, it is red, like our own; as found in commerce, preserved in jars, it is almost snow-white, with a delicate pinkish tinge. For preserving, the stones are first removed; these are quite solid, about the size of a small filbert nut. This white strawberry is reputed the most luscious fruit in the domain of Oriental fruit luxuries. Even with the big stones removed it is still a meaty fruit, large as our largest strawberries. Its taste is a peculiarly exotic one, totally unlike the American fruit, but a good deal like the most luscious muscatel grapes. It is never served with cream, but, in China, with the freshly pressed juice of the sorghum sugar cane, itself a most delicious juice. It is preserved in glass vases and cans in the same pure sorghum undiluted juice.

Many Chinese culinary curiosities do not admit of illustration, or are too difficult to procure—as the roast monkey of extreme southern China; the potted alligator, or Kaman, imported as a great delicacy; the diseased dried goose livers;



The Peculiar "Water-chestnuts" Used in Making the Chestnut-macaroni



Sun-dried Earth-worms from the Padi (Rice) Fields

the bamboo shoots (tasting something like the sweet turnip, minus its slight sweetness); the fresh, also the dried pieces of sorghum sugar cane, used as dessert; and a host of queer fruits and vegetables. Among these are the bitter melons, which are simply Chinese cucumbers, run to seed, and pickled with the bitter rind left on—a disgusting tasting legume; the China gutow—whatever that may mean—which is apparently an Oriental brother of the American spring onion—and which I know from ample experience of the celestial article, requires the “purifying” of one’s breath after partaking thereof. Then, again, among the fruits, there is the acid-sweet carambola—not at all an estimable fruit; and still another fruit which has an odor resembling a decaying egg. This commands a high price.

The yuenan is a cherry-like fruit with an abnormal stone; the ypyk (pronounced uruk) is a sort of choice edible plum, containing a stone and sweet-almond-like kernel—the only known fruit on the globe the outside flesh and inside kernel of which are both perfectly sweet and edible. The writer is believed to be the first person to have brought this ypyk fruit to the notice of civilization. It is unobtainable outside of Asia.

It should be stated that all these illustrations are from the actual specimens selected from the writer’s collection, noted and procured during travels in the East and brought to the office of AMERICAN HOMES AND GARDENS.

The “ripened” eggs of the Chinese are found in commerce in two varieties—first, coated with a thickish layer of solid black earth; second, encrusted with a grayish-white substance evidently produced from barnyard refuse. The contents of the black covered eggs are snow-white; those of the whitish-gray exterior are a glossy jet black inside. They are not putrid eggs, as we know putrid eggs, albeit they are thoroughly “ripe”—there’s no doubt about that! They are eaten

cold or warm, with tea-leaf salad, and can be preserved half a century or longer.

The water-chestnut macaroni (it is called macaroni, from Italian macaroni, by the Chinese themselves, who spell it with a “k”), is a most nutritious food. It is usually served with the boiled bow-wow (doggie flesh) or the stewed cat. The decayed, mealy macaroni is remade into a kind of pancake—a tolerably disgusting food, with a taste resembling the odor of sulphureted hydrogen.

The dried, salted rice-worms—more euphoniously but erroneously called by the Chinese “rice-fish”—are the annoying centipede-like worms which infest the padi fields; but John utilizes them, as he does almost everything, for food. A bloating, wind-creating, unsatisfying food, yet much superior to Boston pork and beans.

The compressed seaweed mat is multiusable. Intended for the table, in soups—it is also used as a family “barometer”—varying its moisture as the temperature rises or falls; as a cure for insomnia, if laid on the face, and its persistent semiozonic odor inhaled through the nose; as a table mat, when a couple of them will impart a seaside-like odor to a room so long as they hold together. In any case, in China, after these multifarious uses, they always wind up in the soup pot.

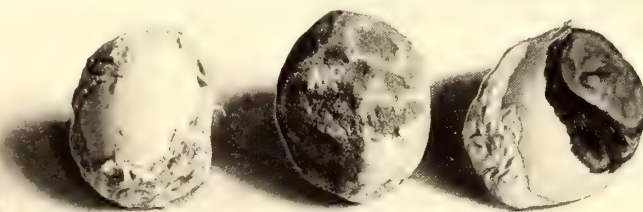
The “Bombay duck” is simply salted, decayed and thoroughly rotted fish, subsequently sun-dried, so that it crumbles between the fingers. It is also thoroughly “ripened.”

The snow-white rice flour biscuits are a queer contrast to the jet black crackers. The former are intensely sweet, and kneaded with rice oil. They are the whitest biscuits known, and are used as an emblem of purity at all the Chinese “babies, ladies and hades”* ceremonies.

*The Celestial equivalent for “cradle, altar and tomb.”



Twigs of the Edible Chinese
Birds'-nests



Chinese “Ripened” Eggs a Score of Years Old or More,
Showing the Glossy Jet-black Interior

Effect of Bagging Upon the Quality of Fruit



FOR several years the *Ecole nationale d'agriculture* at Versailles has recommended inclosing pears in paper bags as soon as the fruit is formed. The latter is thus protected from the worms and the various cryptogamic diseases, and develops more regularly. It is uncovered at the time of ripening, that it may become colored by the sun. Mons. Rivière, director of the agronomic station at Versailles, with the co-operation of Mons. Baillache, wished to determine scientifically the effect of this course of procedure upon the quality of the fruit, and therefore studies were made of the Golden Chasselas and several varieties of table-pears. On comparing bunches of grapes picked from the same vine and at the same height, some of which had been bagged,

while the rest had been developed in the open air, the following differences were found:

	Sugar per Liter.	grammes	Acidity of Juice
Unbagged bunches	198.50	grammes	3.08
Bagged bunches	205	grammes	2.86

“The bagged grape, therefore, is sweeter and less acid than the unbagged grape. As to pears, on the contrary, the bagging increases both the quantity of sugar and of acid. Thus, for 1,000 parts of fresh pulp the *Beurré Diel* contained 82.20 grammes of sugar, when it had been bagged, and but 78.10 grammes when it had not been. But the acidity of the bagged fruit was expressed by the figures 2.40 as against 1.60 for the unbagged. It is for the epicures to decide in which case the pear had the better taste.”—From *L'Illustration*.

The Summer Home of E. C. Richardson, Esq.,

Magnolia, Massachusetts

By Mary H. Northend

With Photographs by the Author



LARGE white house, Colonial in feature, with colonaded porticoes and broad windows, set face to the street, after the manner of those fine old mansions, but far back from the publicity and dust of the thoroughfare among trees and wide lawns—such is the summer home of E. C. Richardson, at

Magnolia, Mass. One reaches the house retired thus amidst its greenery, after passing up a broad and winding avenue which ends at the side entrance porch. A few broad low steps lead up to the latter, and here one is fain to pause for a moment, and looking back to survey from this vantage ground the beautiful panorama extended below. The rather extensive grounds are defined by a face wall of stone. The

wide lawn is smoothly shaven and shows clusters of rhododendrons and shrubs with a few fine trees, just enough to shade without detracting from the broad view. The garden demands a closer examination.

As just stated, the entrance to the house is through a Colonial porch, with supporting columns of Corinthian type. Over the door is a window box of scarlet flowering plants. A wide hallway extends inward from the door, with the broad Colonial staircase at its farther end leading up to the second story floor. The apartment is hung with a very heavy paper of old pattern and of the Colonial yellow tone, the old-time effect being intensified by white trimmings, and by quaint rush-bottomed chairs and a Sheraton sofa. The hall ends in a billiard-room of splendid proportions finished in dark English oak, a brilliant apart-

ment and a prominent feature of the house. At the right of the hall is the den, sacred to the use of the master of the house, and on the door is secured a curious sanctuary knocker fashioned after one seen in York, England. Here, as in all parts of the building, a pure Colonial effect is wrought out both in the arrangement and selection of hangings, furniture and ornaments.

The dining-room at the rear of the den is a study in beautiful architecture. Tapestry hangings and woodwork done in green and white enamel throw into striking and harmonious relief the Corinthian columns which support the fireplace and the exquisitely carved frieze that surrounds the mantel. Ionic columns at another side of the room support boxes of plants, whose perennial luxuriance keeps summer time within

the home. The chairs found in this apartment are copied after those of Robert Morris, the one-time great financier, and after those which once belonged to Thomas Jefferson.

The living-room, which occupies an entire half of the house, is a reproduction of the parlor in the Longfellow house at Portland, Maine. It is a spacious apartment, recessed at intervals by Corinthian pillars, which serve to break its great length. At the farther end the effect is further modified by simulation of a small library. Low bookcases in white enamel, filled with choice volumes, furniture in Dutch blue, and rare and priceless old figure-pieces in the way of odd chairs and tables, are here displayed.

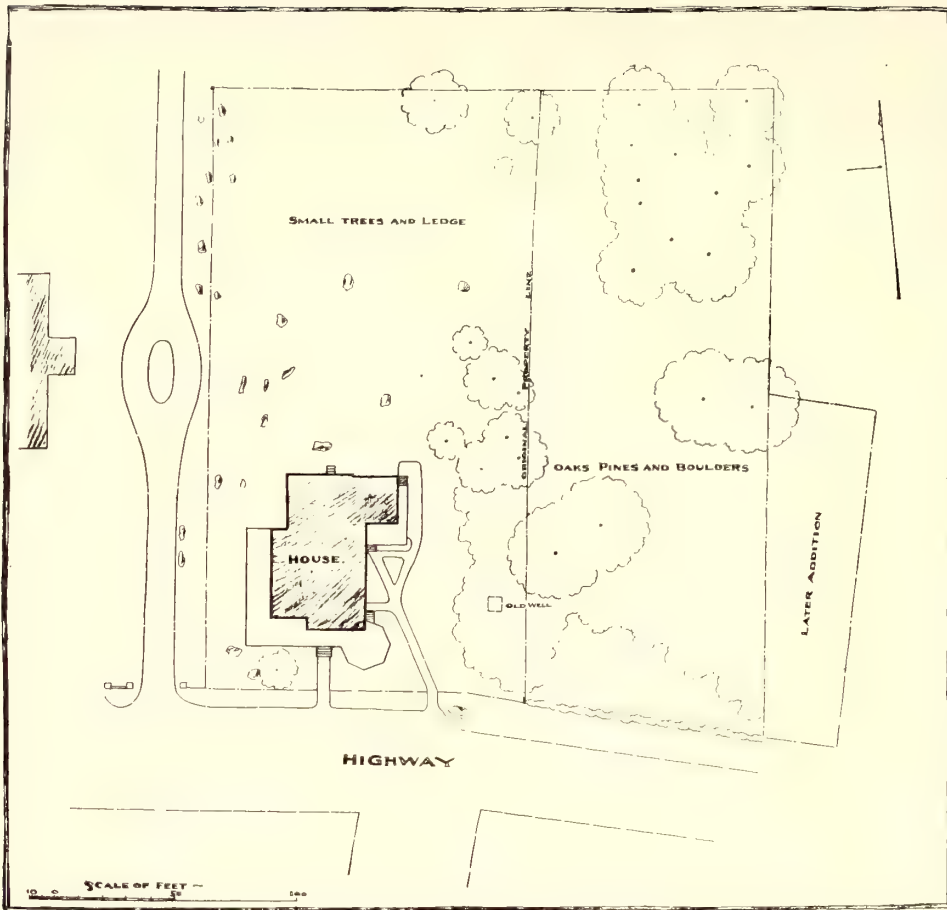
The chambers are hung with various floral designs both charming and restful to the eye. One in a pattern of sweetpeas is especially noticeable.



A Glimpse of the Dining-room with the Hall Beyond



The Simply Designed Living-room



Plan of the Grounds



A General View of

Beautiful and stately the house certainly is in all its appointments, but it is just the sort of interior one would expect from such an exterior. It is not often that one can thus foretell the inner from the outer appearance of a house—only when the architect has been given an ideal location and then full scope for the expression of his talent. Everett and Mead,

the architects in this case, could hardly have designed more satisfactorily. Truly the Colonial is the perfect architecture.

The very land whereon the house stands is historically interesting. It was once the camping ground of the Salem Cadets, the scene of who knows how much emulation, rivalry and romance. It is thus both historical and picturesque.



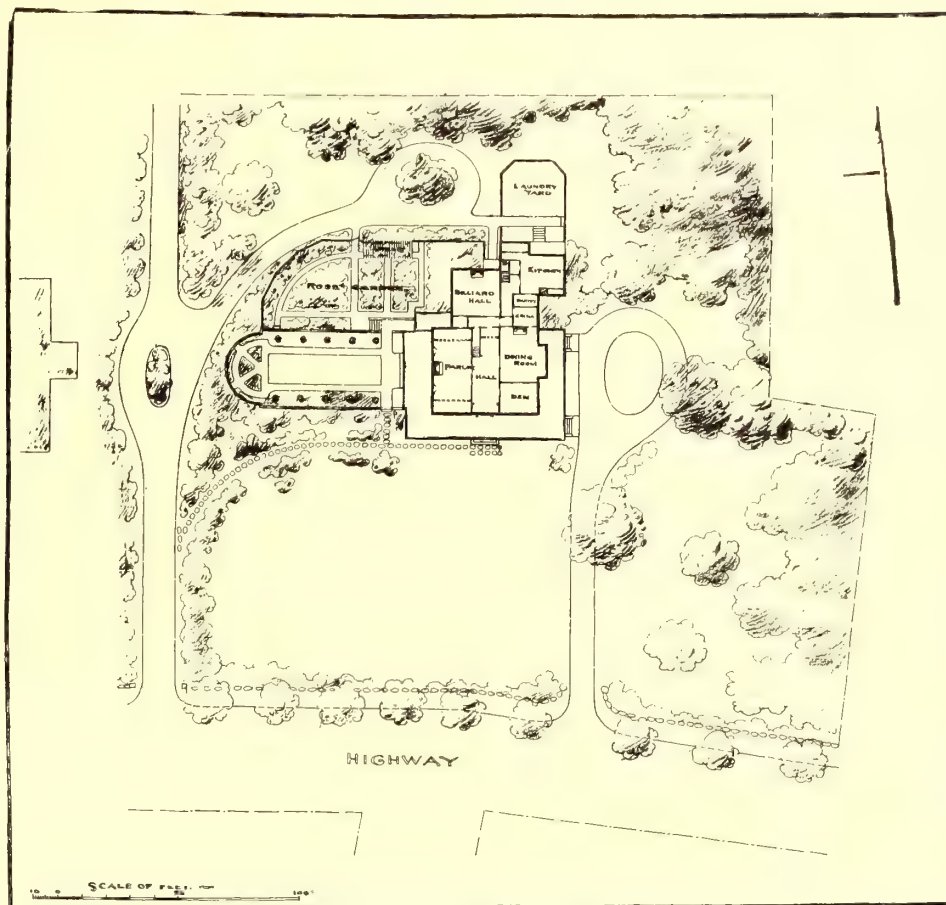
The Broad Veranda



The Pergola



Richardson's House

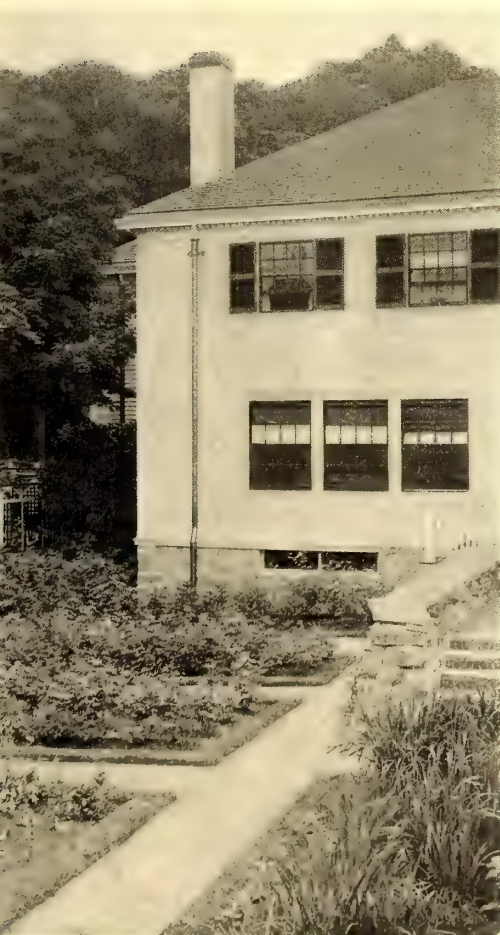


Plan of the Grounds

An open veranda with balustrades in white about three feet high extends across the front of the house. Boxes of scarlet geraniums arranged along the top of the latter add to the artistic effect, while potted bay trees here and there along the floor and large hydrangeas at either side of the steps harmonize the color tone. Entrance to the house may

be gained either at the side or front. At the left of the building, overlooking the rose garden, is a wide covered veranda, or loggia, partly shut in by glass partitions. The veranda is used during the warm weather as a gathering place for the family. It is tastefully furnished with rugs and raffia furniture, and, of course, the inevitable little

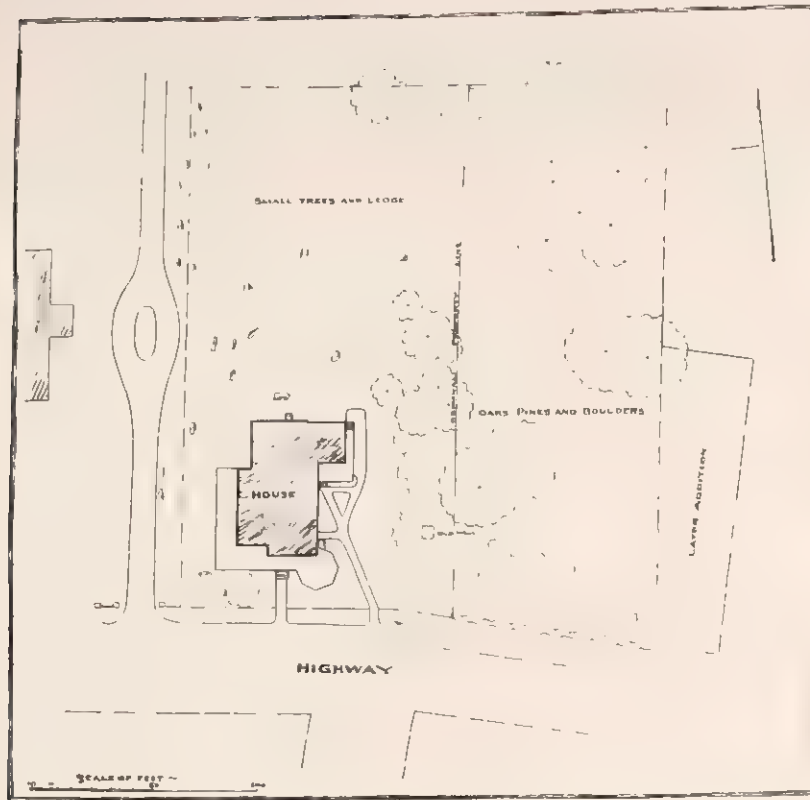
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the Rear



A Bird's-Eye View of the Garden and Grounds



Plan of the Grounds

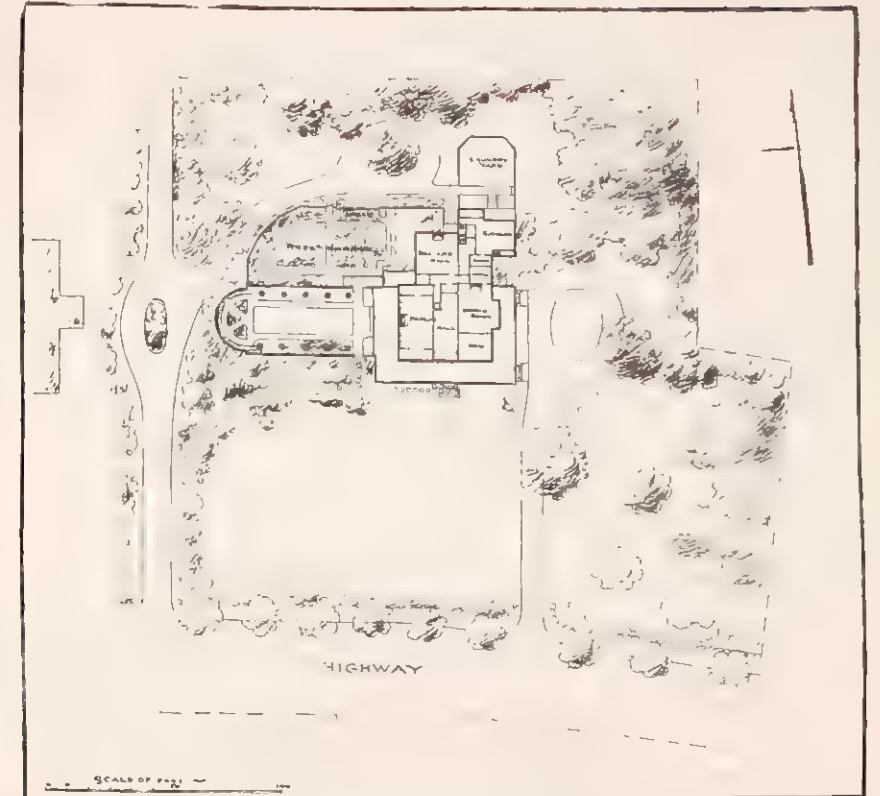
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A General View of Mr. Richardson's House



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Concluded on page 314



The Broad Veranda



The Pergola in the Rear



A Bird's-Eye View of the Garden and Grounds

The White Pelican

By B. S. Bowdish



AMONG the great colonies of birds which still exist in some of the wild lake regions of the western States, none, perhaps, is more remarkable or interesting than the white pelican, striking both on account of its large size and the peculiar appearance that its great bill gives it. Involuntarily, as one views the great birds, either in their native haunts or in the zoological gardens, one wonders how they came to be what they are, from whence the immense bills and the peculiar structures. Our more modern explanations of structural peculiarities take account of the advantages that they may offer to their possessors, and recognize the power of evolution as equal to the task of producing such characters as will best serve the needs. The conditions in which a creature lives thus affect its structure, even though it be very slowly, and in some cases the ancestral forms which are plainly traceable to certain species were vastly different from their present-day descendants. In the case of the pelican, however, fossil remains of the species of long ago are practically the same as our present birds.

The white pelican has been rather more difficult than the brown one to cultivate acquaintance with. Nevertheless, it has been studied in its home, and its habits in the zoological gardens have been observed. It combines a body that is smaller than its thick coat of feathers would lead one to suppose, with lightness of structure and immense wing area in relation to its weight. The expanse of wings of the white

pelican is sometimes nine feet. The bones, like those of other creatures, are hollow and light, and the body is provided with interior air-sacs, giving additional lightness and buoyancy. On the water not a third of the body is submerged, and it seems to be with difficulty that the birds submerge themselves in diving for their prey. This, however, is not a handicap, since they seem to find an abundant supply of food near the surface. Because they are so buoyant they swim easily, riding the waves for hours, when they so desire. I have seen the brown pelicans plunge head downward from a considerable height, striking the water with a resounding whack, like wind-bags, and even then not more than half submerging themselves. On the wing, pelicans are capable of sailing for long stretches, with wings held rigid, and they often skim the water thus, following the undulating contour of the waves. Pelicans secure their prey both by plunging from a height, while flying, and by snatching it up while swimming. The upper mandible is strong, but light, the hooked tip serving as a guard against the escape of fish, while the lower mandible is simply a light frame which supports the pouch. As the bill is opened in grasping the prey the sides of this frame are bowed outwardly by the action of a set of muscles for that purpose, the tip being contracted, and the mandible and pouch becoming a very serviceable dip net.

The water is readily expelled from the apertures at the sides, while the upper mandible, resting across the middle of the lower, prevents the escape of the fish.

Most very young birds are fed with predigested food regurgitated by the parent from its crop, the parent's bill, dur-



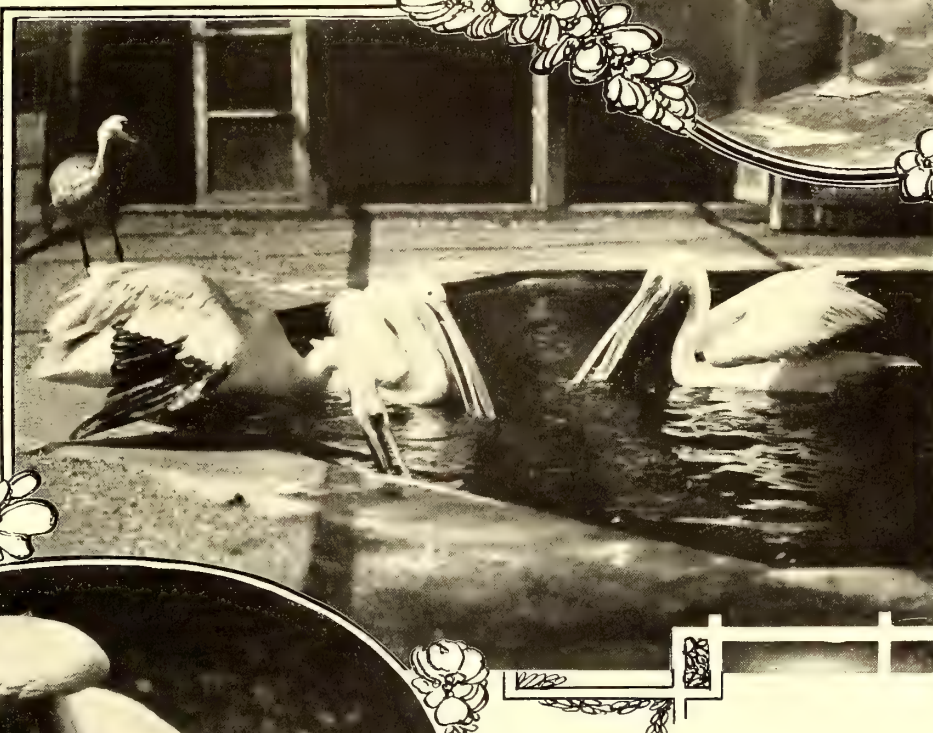
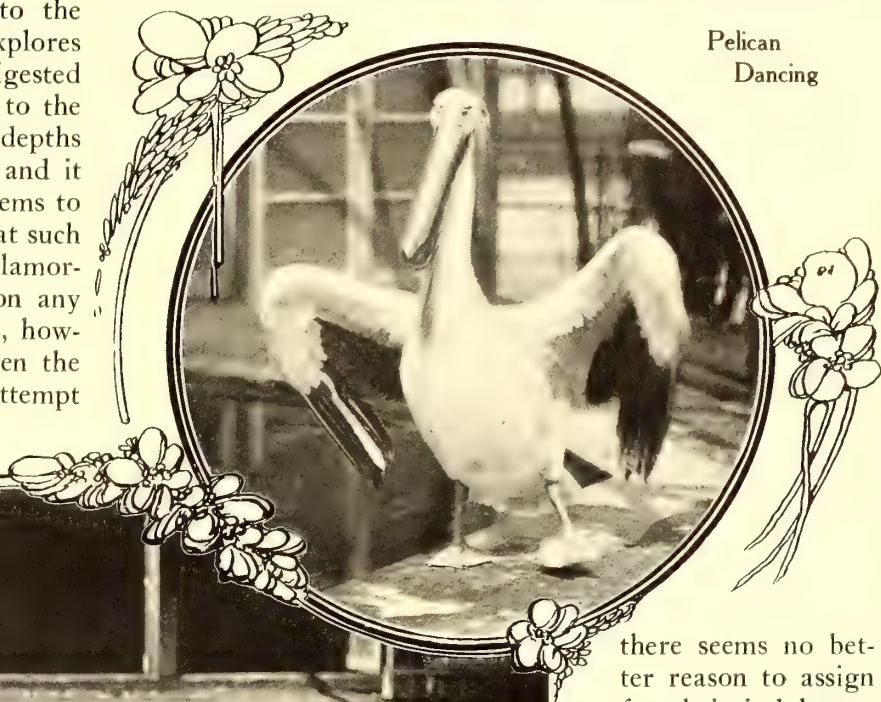
Characteristic Attitudes Assumed by Pelicans

ing the process, being thrust well into the throat of its offspring. When we consider that the bill of the pelican is at least equal in size to the entire newly hatched young, the impracticability of this method of feeding the young in their case is at once apparent. The procedure is therefore reversed; the young pelican dives head foremost into the cavernous depths of its parent's pouch, and even explores the recesses of the parental throat. Fish either predigested or freshly caught reward this exploration, according to the age of the young pelican. Submergence in these depths of the oral larder is apparently a fatiguing process, and it is some time after a meal before the young pelican seems to feel himself again. Young pelicans, after they arrive at such size as to be able to get about, do not restrict their clamorings for food to their own parents, but even levy on any pelican that happens to waddle along. The old birds, however, always distinguish their own offspring, and when the selection is made, the other young pelicans make no attempt to disturb the feeding.

In the white pelican, the upper mandible is adorned with a thin, triangular, bony crest, composed of horny fibers, and attached to the cutaneous covering of the bill, but not to the bony structure itself. These appendages are worn only during the breeding

occasionally indulging in a grotesque dance. Such a habit is indulged in by some such birds as the sandhill crane at the breeding season. However, the great blue heron has been known to indulge in family dances of this character in the fall, and such dances having obviously no pairing significance,

Pelican
Dancing



there seems no better reason to assign for their indulgence than that the birds, like their human brethren, find this diversion amusing and to their liking.

The larger creatures of our country passed before the advancement of civilization. Before people realized that the immense herds of buffalo that ranged the western plains were destined to extermination,

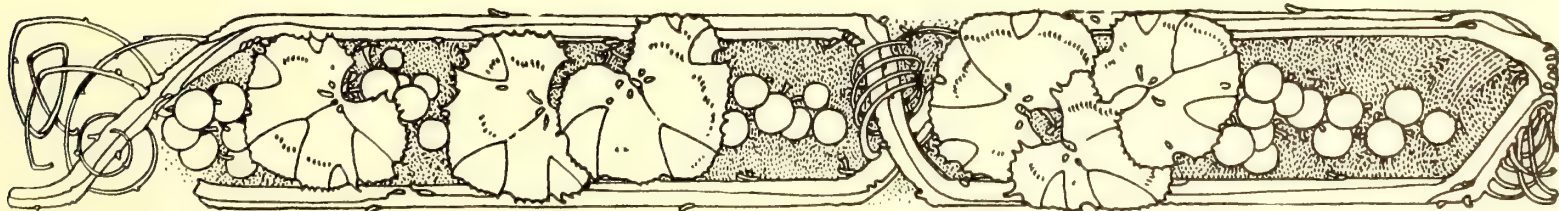
they were gone, and there remained of them only small, tame-looking groups in the zoological parks, and the traditions that linked them with the Indian and the cowboy.

Our fathers tell us of the flocks of wild pigeons that darkened the sky, and broke down large branches in the woods where they roosted, yet to-day it is rarely, if ever, that one is seen. The great auks that once densely peopled a northern island have been unknown, save from a few mounted specimens in the museums, for the last fifty years. For about the same period the Labrador duck has been extinct. The king of the world's woodpeckers, the ivory-billed, is following fast the same road. Many of the sea-birds, and most of the ducks and geese, have been greatly reduced in numbers.

Unless the future holds some bright surprise in store for us, the white pelican will soon be numbered with those creatures whose wild life is known only as a matter of history.

season, being afterward shed. As the birds are said to be somewhat quarrelsome during the breeding season, and as these objects are possessed only by the males, it has been thought that they are in the nature of weapons.

Pelicans have an amusing, and rather obscure, habit of



Three Low Cost Houses at Dyker Heights, New York

By Paul Thurston



IT IS a difficult matter in planning a house to design one which will combine all the principles of good construction, pleasing elevations and well arranged plans, and at the same time one which can be built for a comparatively small amount of money.

It is, also, difficult to secure a house of a distinctive character, for the reason that the usual house built of this class, at the present time, for any such sum of money as the ones illustrated herewith, are usually of the class known as the "square-rigged" type, and are consequently without any pronounced charm in them.

The difficulty, however, has been overcome, as is demonstrated by Mr. C. Schubert, in the three houses he has designed for Mr. Benjamin Guisberg, whose house presents one type, Mr. M. T. Bull's another, and Mr. Ingomals still another, which he has built at Dyker Heights, Brooklyn.

The House of Benjamin Guisberg, Esq.

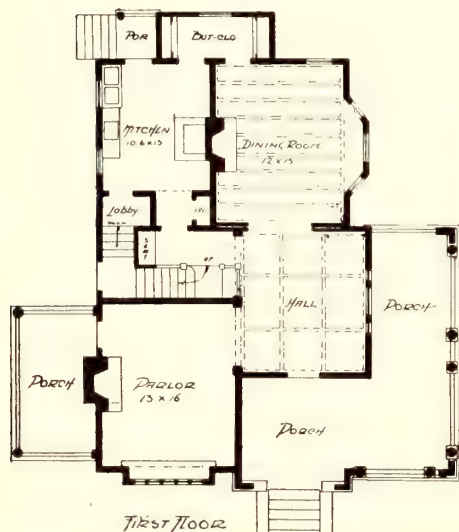
The interesting house built for Benjamin Guisberg, Esq., has a pleasing feature in the placing of the entrance porch at

isolated manner and in so close proximity to the kitchen that no rear stairs seem necessary when making arrangements for them.

The parlor has oak trimmings, painted ivory white, a bay-window with a seat, and an open fireplace with cream tile facings, a hearth and a Colonial mantel. A French window opens into the living-porch from this room.

The dining-room is also trimmed with oak and has a beamed ceiling and a plate rack extending around the walls, forming a division for the decorations. There is a bay-window with seat, and an open fireplace with green mottled tiled facings and hearth. A door opens into the butler's closet, which is fitted with drawers and dressers, while another door opens into the kitchen, which is fitted with all the best modern conveniences.

The second floor is treated with white paint, and the walls of each room are in one color scheme. There are four bedrooms, each provided with large closets. One of the bedrooms is fitted with an open fireplace. There is also a bathroom, furnished with a tiled wainscoting, porcelain fixtures and exposed nickelplated plumbing. The third floor con-



Mr. Guisberg's House Is Well Balanced by the Porches at Either Side

the front and the living porch at the left side of the house, balancing the elevation with a complete harmony. Much care has been given to the planning of the house, in the arrangement of its various rooms and the utilization of all the available space. In doing this, it means something more than the getting of the largest number of rooms in a given area, for the rooms must be properly related to one another and thoroughly adapted to the uses for which they are intended.

There is a cellar under the entire house which is inclosed with a stone foundation and underpinning. The building above is covered with matched sheathing, good building paper, clapboards and cedar shingles. The clapboards and trimmings are painted a light gray and the shingles are stained in harmony. The roof is covered with similar shingles and is stained a moss green.

Upon entering the house one finds oneself in a square hall, which opens into the parlor, dining-room and the stair hall. This hall is trimmed with oak and has a beamed ceiling. The staircase, which is an ornamental one, is separated from the hall proper by an archway, and is placed in such an

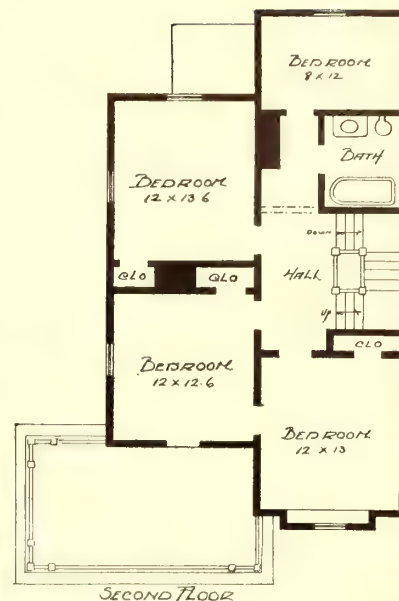
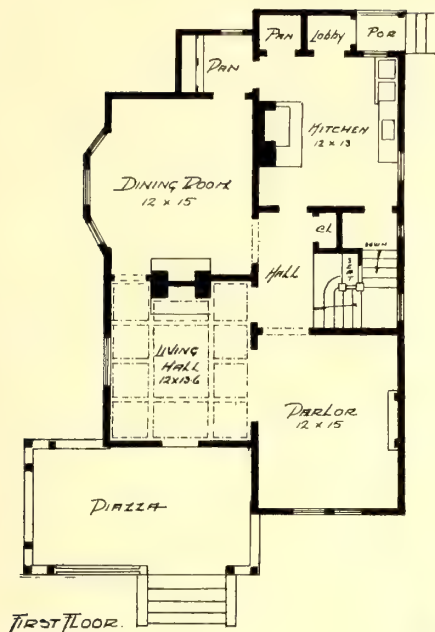
tains one servant's room and an open attic for storage uses. The cost of this house complete was \$3750.

A House Built for Mr. Ingomals

The whole style of this house is simple and good, and the red tone of the underpinning, the silver gray of the painted clapboards, and the soft brown of the shingles, harmonize well with the ivory-white painted trim, and the moss-green stained shingled roof.

The house is furnace heated and the cellar is divided into fuel rooms, etc.

The entire arrangement of the house is most excellent, and it is divided into four rooms on the first floor and the same number and bathroom on the second. A novel feature of this plan is the staircase, which is placed in a hall by itself, and which, connecting with all the rooms, answers, on account of its convenient location, for both the rear and front stairway. Entrance to the house is direct to the living-hall, which is trimmed with oak and finished in a Flemish brown, and has an open fireplace with brick facings and hearth and a Dutch mantel. The stairway, as already mentioned, is



The Whole Style of Mr. Ingomals' House is Simple and in Good Taste

placed in a separate hall, and rises up from a broad landing. It has a seat at its side, and an ornamental balustrade. The parlor is separated from the living-hall by an archway provided with Colonial columns. Opposite the entrance there is placed a console mirror extending from the floor to the ceiling. This room is also trimmed with oak, and is finished in a Flemish brown. The dining-room, trimmed with a similar oak, is finished with a golden brown, and has an open fireplace with a brick hearth and facings and an oak mantel. A door from the dining-room leads into the pantry, provided with drawers and dressers, and from the pantry another door leads into the kitchen, the latter being fitted with all the best modern conveniences.

The four bedrooms and bathroom on the second floor are trimmed with cypress and finished natural, while the walls are tinted in one color scheme. The bathroom is wainscoted with tiles, and is furnished with porcelain fixtures and exposed nickel plumbing.

There is one servant's bedroom and trunk room on the third floor. This house cost \$3200 complete.

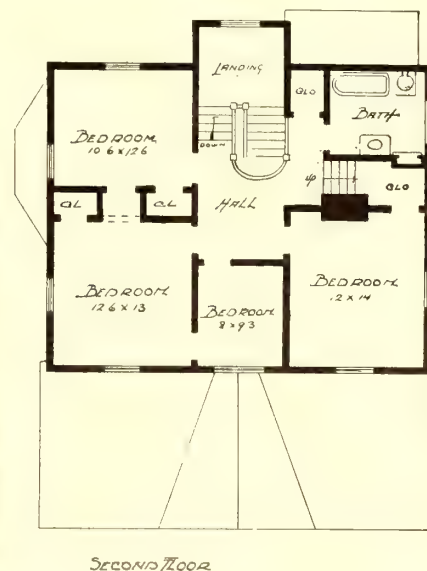
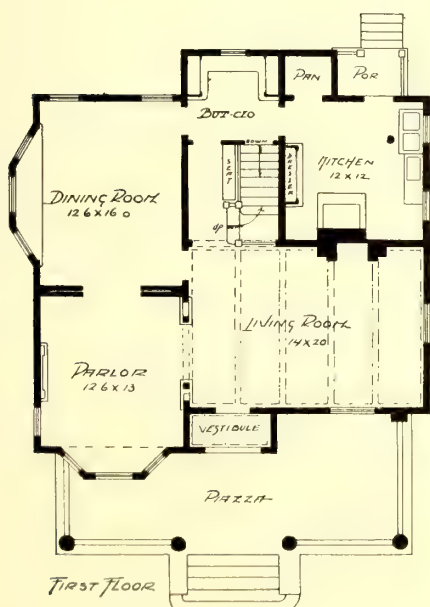
The House of M. T. Bull, Esq.

The first consideration in building a suburban house for Mr. Bull was to look over the site and arrive at a definite conclusion of the best style and form to use, and this is what Mr. Schubert did when he designed this house. The house

is pleasing to the eye and is in good taste. The form is on the square, thereby giving good square rooms in the interior and an exterior that is dignified and not over ornate in its treatment.

The underpinning is built of rock-faced stone, and the exterior framework is covered with matched sheathing, good building paper and shingles which are stained a soft brown, while the trimmings are painted white. The roof is covered with shingles and stained a moss green.

A vestibule forms the entrance to the house, which is trimmed with oak. From the vestibule one enters the hall, which occupies the greater part of the front of the house. It is trimmed with oak and has a paneled wainscoting seven feet in height, and ceiling beams, the whole of which is finished in Flemish brown. The fireplace is built of brick, with brick facings, hearth and mantel. The staircase is recessed from this hall, and is separated by an archway and screen, and on account of its semi-isolation it seemed advisable when planning this house to dispense with the servants' staircase and use this in combination with an access to it from the kitchen through the butler's pantry. The parlor, separated from the hall by an archway, supported on columns, is trimmed with oak finished in a golden oak. Opposite the entrance is a console mirror rising from the floor to the ceiling. A Colonial base two feet in height extends around the walls of this room. The house cost \$4250.



Mr. Bull's House at Dyker Heights



IN ANCIENT Egypt there were three varieties of the lotus: the sacred lotus, called by modern writers the "rose lily," because of its beautiful pink color; the sweet-scented blue lotus; and the white. The seed of the white lotus, called the "sacred bean," was used for food and made into bread, its taste being like that of sweet almonds. As it was said to affect the memory so that people forgot their native countries, Homer warned his countrymen to "abstain from beans."

The Egyptians gave a lotus to each guest at festivals, offered it to their gods in religious ceremonies, and painted and carved its form upon their temples. At feasts the walls were decorated with the lotus, and a vase of the fragrant varieties was placed on a table before the giver of the feast. The attendants hung necklaces of the flower on the neck of each guest, and placed a wreath on his head, so arranged that a bud or cluster of blossoms fell exactly in the center of the forehead. It was regarded as a symbol of Life by the peo-

ple of upper Egypt. The seed was sown by wrapping it in clay, and throwing it into the water. The words "Cast thy bread upon the waters and it shall return to thee after many days" refers to the way the lotus was planted.

In our own country, also, the Indians planted the lotus and used the roots and seed for food. At Sharpstown, near Woodstown, N. J., in the southern part of the State, is a millpond belonging to Mr. A. M. Oliphant. It runs the entire western side of the town, covering between fifteen and twenty acres, and is bordered by a fine grove on the western side. It is filled with lotus plants the Indians set out, the variety known as the *Nelumbium luteum*. The blooms, some of which stand five feet out of water, measure five to ten inches across, and are a beautiful canary yellow. The flowers last about six weeks, from the middle of July till the first of September, and people come many miles while they are in season to see this superbly beautiful sheet of water covered with blossoms. The plant roots are very deep in the mud, and look like a sweet potato. The seed pod is as large as



A New Hampshire Water Garden of Truly Tropical Effect



Pink and Yellow Nymphaea and Water Hyacinth in Cemented Basin



The Egyptian Lotus Successfully Grown in New Jersey

an ordinary teacup, and is filled with seeds in separate cells. It has been found that aquatics given the same conditions as our native water lilies will grow profusely, and give more pleasure than any other plants.

For those who have no natural or artificial basins, several varieties can be grown in tubs, or half barrels, set down in the earth. The results are especially attractive and effective where the spaces between the tubs are filled with stones and earth, and sedges, ferns and other marsh-loving plants, hardy ornamental grasses, clumps of bamboo and hardy herbaceous plants are set among the rocks, taking care they do not overshadow the water plants. The sweet alyssum, called "carpet of snow," is a beautiful plant to surround the tubs. All of the *Nelumbia* and the hardy *Nymphaeas* can be well grown in half tubs.

The best soil is from the rotted vegetable matter from ponds and swamps. The best substitute for this is heavy garden loam mixed with compost. Place six inches of earth in each tub; plant but one or two roots in each, scatter one inch of sandy gravel over them: then fill the tubs with six inches of water, avoiding the displacement of the sand. As all water lilies prefer still, warm water, it is a mistake to have any fountain or continuous inflow, and even in natural ponds a large inflow of cold spring water affects the growth harmfully. In the smaller artificial ponds or tanks the best method is to replace the water by a hose, in the late afternoon or evening, syringing the plants at the same time, thereby keeping in check the green and black fly.

Mr. William Macfarland, superintendent of schools in Bordentown, N. J., devotes much attention to the cultivation of plants, and is a writer on such subjects. He has, in his yard, a three-by-five feet water garden, flanked, next the garden path, by Japanese iris, such as Onoto Watanna says make a purple world of Japan.

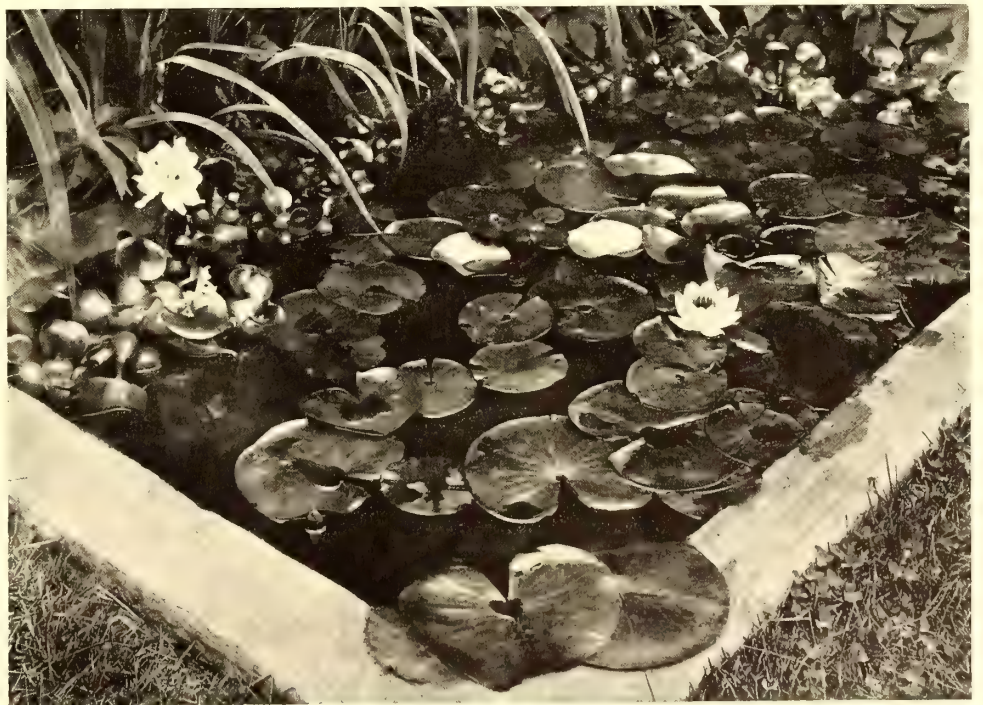
The walls and bottom of the basin are of single brick set in cement, and covered by cement to prevent leakage. A garden hose is used to fill it. The plants in it are hardy water lilies, a Cape Cod pink, or *Nymphaea odorata*, var. *rosea*, of a delightful scent, and a yellow *Nymphaea marliacea*, var. *chromatilla*, with spotted leaves. A water hyacinth, with its floating foliage, suspended roots, and brilliant blue flowers assists in the purification of the water. The hyacinth is tropical, and needs to be removed to the house in winter. It grows well in a jardiniere, with some earth

and water, and should be kept always in the sun. The water in the lily basin is never changed except by overflow in rains and by evaporation, and the plants have not been disturbed for five years. There are a few goldfish in the pond. In early June they deposit their eggs on the roots of the water hyacinth. If left in the basin, the gold fish eat the eggs, so they are removed, for hatching purposes, to a tub of water holding the hyacinth. The water in the basin is very pure, and the choice fish put in it five years ago are still flourishing. It is advisable to place fish in ponds and tanks, for the benefit of the water, and to prevent mosquito breeding. An occasional frog finds its way to this Bordentown water garden.

In cold weather the water is lowered eight inches by dipping it out, and a cold frame is put on. In hard winter additional covering of leaves or straw is put around the wall and boards over the cold frame.

On Chestnut Street, in Salem, Mass., Mr. Philip Little has a dainty lily pond as an addition to a lovely garden. The method used in constructing a cement basin of this type is to pound the bottom and sides of the excavation till they are firm; then cover the whole with a layer of six inches of puddled clay, pounding it with wooden mauls to bring it to a solid wall. After this the sides should be covered with rough stones, and a thin layer of concrete added. The top of the wall should be plastered with cement. A depth of two feet is about the right dimension. This cemented pond of Mr. Little's is double in construction, like a figure eight. The flowers are of all the vari-colored *Nymphaea*.

Another very beautiful water garden is owned by Judge C. E. Hoitt, of Nashua, N. H. This is situated on Judge Hoitt's country estate, a mile and a half from Nashua. The lily pond is a cement basin, semi-circular, set in a hollow at the base of a rise of ground, on the path to the lodge and reading-room. In the basin are grown *Nelumbium speciosum* (the Egyptian lotus), and different varieties of *Nymphaea*. Japanese rice is planted about the basin and in it, and Japanese iris and banana plants skirt it. This garden is so beautiful that the daughter of a former governor of New



These Plants Have Been Growing for Five Years in this Basin Without Change or Removal

Hampshire makes it a sketching ground for her work in water colors.

Some forty years ago Mr. E. D. Sturtevant settled in Bordentown, N. J., and remained there until 1889, when he removed to Holly Wood, California. Mr. Sturtevant was a florist, much interested in the growth of aquatics, and known as the father of water-garden culture. He rented a pond for the purpose of propagating the Egyptian lotus for sale, also to prove that they are hardy in this climate. He was successful, far beyond his expectations, until the mill was burned and the water drawn off, when the plants perished.

In his florist's yard in the center of the town, Mr. Sturtevant had an artificial tank for the culture of the *Victoria regia*. I visited this in 1882, with a group of young people from the Bordentown Female College. We viewed it in the evening (when it was a doubly fascinating sight, heightened by the shadows cast by an old-fashioned lantern), the magnificent blooms rearing their white waxen heads above the water. This garden has been removed to California.

The water gardens noted in this article are but types, and very interesting and beautiful types of many such gardens that have been successfully cultivated in many parts of America. They show not only how highly interesting such plants are, but how readily they may be cultivated and brought to full perfection of maturity. Why a water garden should, at any time, have been thought a matter of difficulty,



The Egyptian Lotus May Be Readily Grown in a Tub

is one of the mysteries of the modern art of gardening. Nothing is easier than the making of a suitable pond or basin, if one's grounds has no natural stream, and nothing is easier than to grow in such a basin the most beautiful of water plants, giving rich and splendid effects with blooms that are equaled by few earth plants.

No garden of any sort is produced without more or less trouble and labor. The beautiful garden implies and requires more or less attention. Even if it be but a small one, there must be more or less personal labor bestowed upon it. And this labor must be constant and unremittantly applied year after year. It is work that is never done, albeit it yields constantly varied delight and interest. Doubtless the water garden seems, to many, to add another quota of labor to the many details most gardens require; it seems, moreover, to require the cultivation of strange and exotic plants, whose methods of growth are unfamiliar and whose successful development is more or less problematical.

As a matter of fact, neither of these propositions is true. The labor involved in making and caring for a water garden is distinctly less than that needed for the cultivation of the ordinary garden, and it is conspicuously true that the cultivation of the water plants has been demonstrated to be easy and complete. The water garden may thus add a new charm to our rural grounds, with quite a minimum of labor and a maximum of effect. These are two ends not to be overlooked in the arrangements of country grounds.

A Vacation Problem Easily Solved

By Phebe Westcott Humphreys



WHEN outing funds are low and health or business demands an expensive vacation trip for the older members of the family, the satisfactory disposal of the growing boy becomes a serious problem for the mother. The one great desire of his heart—"camping with a lot of fellows"—offers many advantages; good health from outdoor life, active and delightful exercise, a closer acquaintance with instructive nature; but on the other hand it fills the mother heart with dread of possible harm when gunning, deep-water fishing, swimming, and unchaperoned freedom make up the program of daily camp life.

And what boy would knowingly tolerate a chaperon? Here lies the secret of successfully solving the problem. Let the father or the mother of the most persistent would-be camper sanction the movement, allow him to choose his camping companions, and then make arrangements with the head of each household from which a boy has been chosen, to rent the camp site and supplies on the co-operative plan, and engage a secret chaperon. The expense for this purpose will be very slight when divided among several families.

The camp site should be located in the mountains or in some quiet farming section, near famous boating and fishing

grounds; and there will be little difficulty in finding a man from a nearby hotel or farmhouse to act as visiting chaperon—to devote only a portion of his time each day to the boys, while keeping a general supervision over the campers' pastimes and provisions.

The secret service idea should be carefully guarded. Let the caretaker first appear on the scene as a chance visitor, after tents are pitched, and arouse the enthusiasm of the boys in relating early camping experiences and in the advantages of their surroundings. And while putting up at a hotel or farmhouse let him watch over camp and campers from a distance, appearing to the boys simply as a good chum, who may be depended upon to increase their pleasure in each day's sport. Let him also send regular letters to the parents of the boys that will allay all anxieties that might arise from letters of boyish enthusiasm. Then the parents may travel, or spend their time at a fashionable hotel if desired (where the boys would find it irksome as well as expensive), knowing that their boys are cultivating methodical ideas in attending to their own camp cooking and housekeeping and independence in providing daily table supplies; and at the same time are having a royal good time in fulfilling the cherished desire of their hearts. It is the most agreeable solution of the vacation problem for boys.

The Purification of Sewage and Factory Waste

By E. Boullanger, of the Pasteur Institute at Lille



THE methods which have been devised in recent years for purifying and rendering sewage and the waste water of factories innocuous, before allowing them to flow into streams to poison fish and possibly human beings, may be classified in three groups: purely chemical, purely biological and mixed. In the last group, part of the organic matter is precipitated by chemical means, and the water is then further purified by biological methods.

The principal reagents employed in chemical purification are ferric sulphate, ferric chloride, calcium permanganate, lime and chloride of lime. When any of these substances is added, in suitable proportion, to sewage water, a precipitate is formed which entangles and carries down with it all matter in suspension, leaving the water clear and partially purified. As an example of these chemical methods we may take the process of purification with ferric sulphate, which was recently studied at the experimental station at La Madeleine-Lille. The sewage, flowing continuously into a cistern, receives, through an adjustable inlet cock, a solution of ferric sulphate in a proportion determined by a preliminary experiment, and is then pumped into an elevated clearing basin, which overflows into a second basin. The solid matter accumulates on the bottoms of the basins, chiefly of the upper one, and the clear water flows off from the top of the lower basin. When the basins have become filled with soft mud they are emptied by opening sluices, and the

mud is passed through a filter press, which converts it into cakes containing fifty per cent. of water. Chemical analysis of the water after purification shows that from forty to sixty per cent. of the soluble organic matter has been precipitated. The water, therefore, is only about half purified.

The advantages of the chemical method are the following: Unlike the biological method, it is applicable to water rich in organic matter or in antiseptic substances. In some cases it permits the extraction of fats and nitrogenous substances of commercial value. Finally, it does not require an extensive plant.

On the other hand, the chemical method offers many inconveniences. It is very difficult to regulate the quantity of the reagent so as to secure satisfactory purification because the proportion should vary with the chemical composition of the sewage or waste, and this may vary from minute to minute. At best, the purification is incomplete, and the water still contains organic matter which may become offensive. The outlay for reagents, even the cheapest of them, is heavy, because of the great volume of water to be treated.

Finally, the dehydration of the precipitate by filtering and pressing is laborious and costly, and it is often impossible to dispose of the product as its value as an agricultural fertilizer is uncertain. Every city that has tried chemical methods has encountered these difficulties, so that, despite their seductive simplicity, attention has been turned to methods which do not produce bulky and worthless waste products.

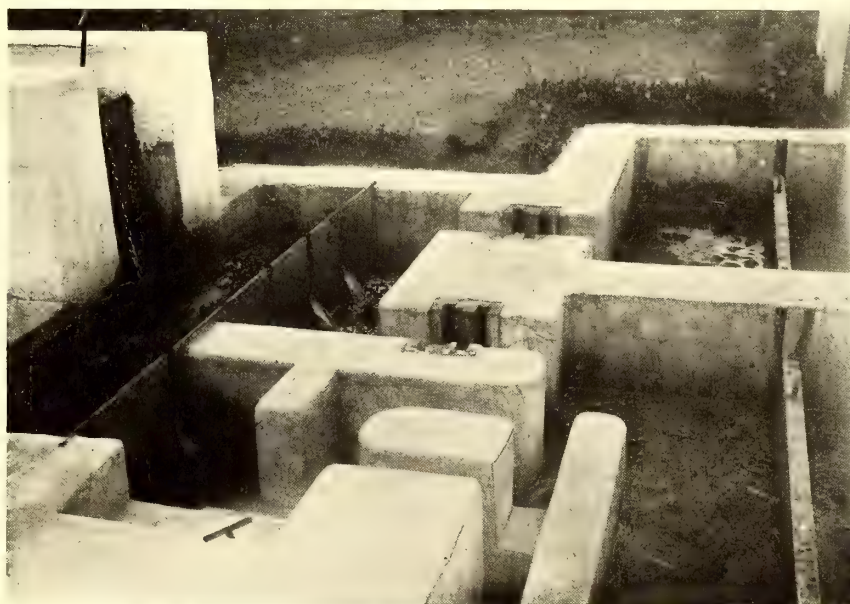
The first employed of the biological processes were irrigation and intermittent filtration. In the irrigation method the water to be purified is spread over cultivated ground. Here it leaves its organic matter, which becomes converted, through the agency of bacteria, into nitrates, water and gaseous products. This method has been adopted for the purification of the sewage of Paris. It requires a very porous soil of such chemical composition that it will effectively attract and extract the organic matter which is dissolved in the water. The soil must also be well aerated, and consequently the irrigation must be intermittent and not so copious as to drown the land. Finally, the purified water must be removed from

the subsoil by a good system of drainage. When all these conditions are fulfilled excellent results are obtained. The irrigated land is usually planted with vegetables in order to utilize and remove the nitrates, which are the ultimate result of the decomposition of the nitrogenous matter by bacteria.

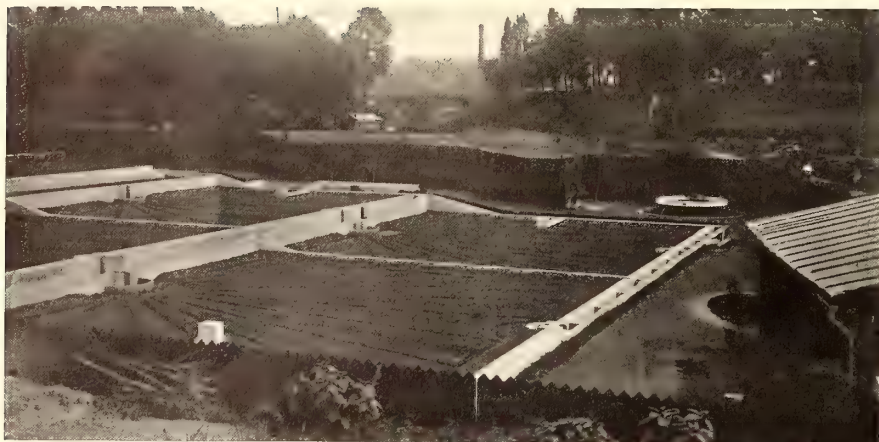
The irrigation process, when conducted with care, furnishes perfectly pure water, but it is attended with certain serious inconveniences. It is not always possible to find, near a city, a soil of the requisite depth

and permeability. The method requires vast plots of land and extensive and costly piping. The best soil purifies only about one quart of sewage per square foot per day, and the usual rate is less than one-third of this. Consequently a plot of about 800 acres would be required for the purification of the sewage of a city of 100,000 inhabitants, amounting to 350,000 cubic feet per day. The method is therefore impracticable in many cases, owing to the lack or great cost of suitable land.

If the sewage is allowed to flow intermittently upon beds of coarse sand, a much greater volume of water can be purified. This fact is the basis of the method of purification by intermittent filtration, which has been studied chiefly at the experimental station at Lawrence, Mass. The sewage flows at regular intervals upon beds of sand, six or seven feet thick, in which bacteria rapidly develop and destroy all organic matter. The intermittent irrigation is necessary in order to admit air to the beds between the floodings. This method can be employed only on sandy soils. In some cases crops are raised on the filter beds. The results obtained by



Septic Foss, Showing Sand Chamber



Bacterial Beds of First and Second Contact at La Madeleine-les-Lille

this process are excellent. Unfortunately it retains some of the disadvantages of ordinary irrigation. The quantity of water purified is limited to three or four quarts per square foot per day, so that the area required for a large city is still very great. Besides, sandy soil is not found everywhere.

The results obtained with intermittent filtration suggested to the English chemist Dibdin the idea of effecting the decom-

position of the organic matter by the action of bacteria in specially contrived artificial beds, instead of allowing the action to be controlled by the nature of the ground, as in the preceding methods. He hoped thus to accelerate and regulate the work of the bacteria, and consequently to purify a much larger quantity of water in proportion to the area employed. Dibdin's first experiments were made in 1895. His artificial bacterial beds were composed

of a mixture of coke and burned clay. The water, after settling and being decanted, was caused to flood the first bed, where it remained two hours. The partially purified water then flowed to a second bed, where in two hours more it was purified so well that it could safely be allowed to flow into streams. After each flooding the beds were exposed to the air for four hours to enable the bacteria to multiply. But it was discovered that these beds soon became clogged with filth, and then required two or three weeks' rest to fit them for further service. To avoid this inconvenience Cameron conceived the idea of interposing between the sewage supply pipe and the bacterial beds a series of ditches called septic fosses, in which the putrefiable matter in suspension could be deposited and then dissolved and decomposed by anaerobic bacteria.* The water which flows from the fosses holds almost no matter in suspension, and its dissolved organic matter is very easily decomposed by the bacteria of the beds, which, consequently, do not become clogged.

The biological processes, as these methods of Dibdin, thus modified, are now called, have been

* Bacteria which, unlike the aerobic bacteria of the filter beds, do not require the presence of air.

tested at Exeter, Veovil, Manchester and elsewhere. The results obtained have generally been good, and the study of these methods has greatly developed in the last few years. With the energetic and fruitful initiative of Dr. Calmette, director of the Pasteur Institute of Lille, and the aid of a large subsidy from the national fund for scientific research, France has now, in turn, taken up the study of the biological methods, and sufficient work has already been done to show that these methods are very practical and very advantageous.

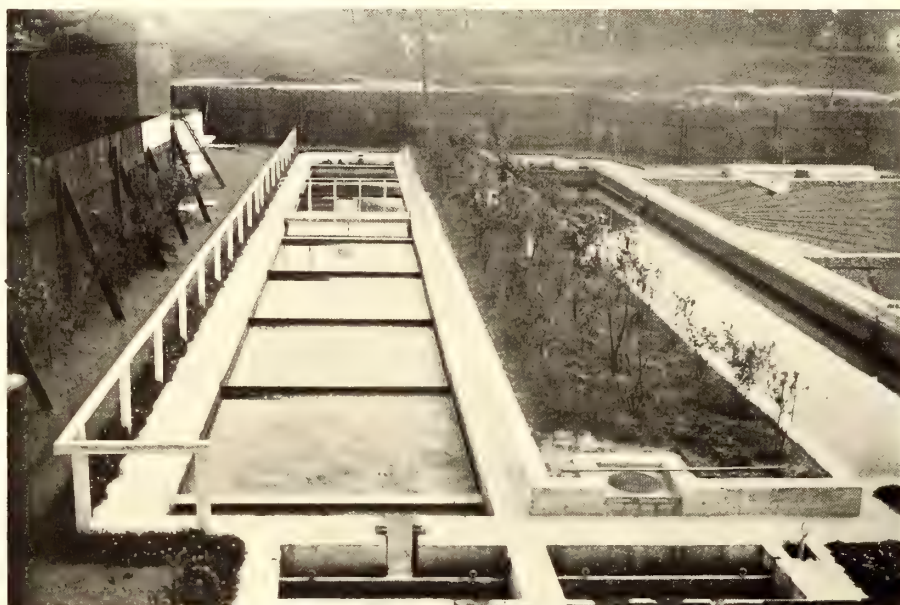
Let us see, then, how these methods should be applied in practice, in accordance with the investigations made at the experimental station for the purification of water, at La Madeleine-les-Lille.

Artificial bacterial purification comprises three operations: First, the separation of non-putrescible solid residuum (sand, stones, fragments of metal, etc.); second, the solution, in the septic fosses, of organic matter in suspension, and its partial conversion into gases; third, the decomposition of soluble organic matter in the bacterial beds.

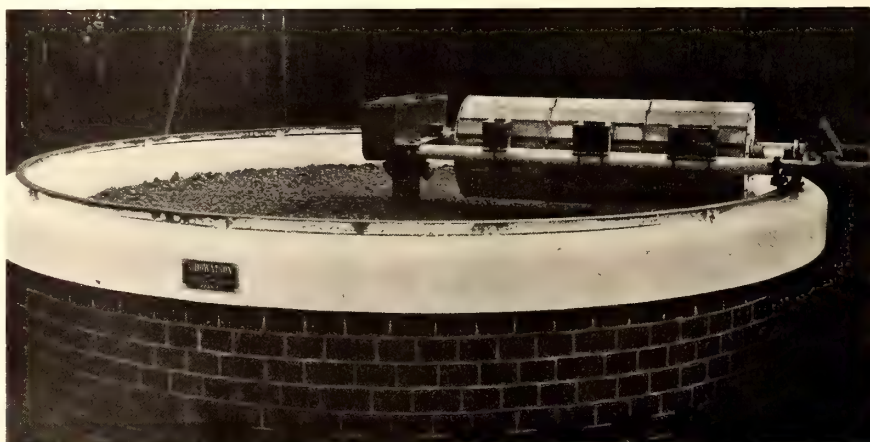
The first operation is purely mechanical. The sewage first traverses a chamber with double gratings which retain floating bodies, and then flows very slowly into a chamber containing a thin layer of sand, on which the gravel and metallic particles are deposited. This deposit is removed at regular intervals with hand or chain scrapers.

The water next enters the septic fosses. These are long basins of rectangular cross-section, lined with masonry and subdivided by incomplete transverse partitions which check the flow of the water and facilitate

deposition of sediment. Their depth is ten or twelve feet, their length and width such that they contain one day's output of the sewer so that each gallon of water occupies twenty-four hours in traversing the length of the system, which may consist of several parallel fosses or one very long one. The fosses discharge by overflow, and are consequently always full. The muddy sediment which collects in the bottom of

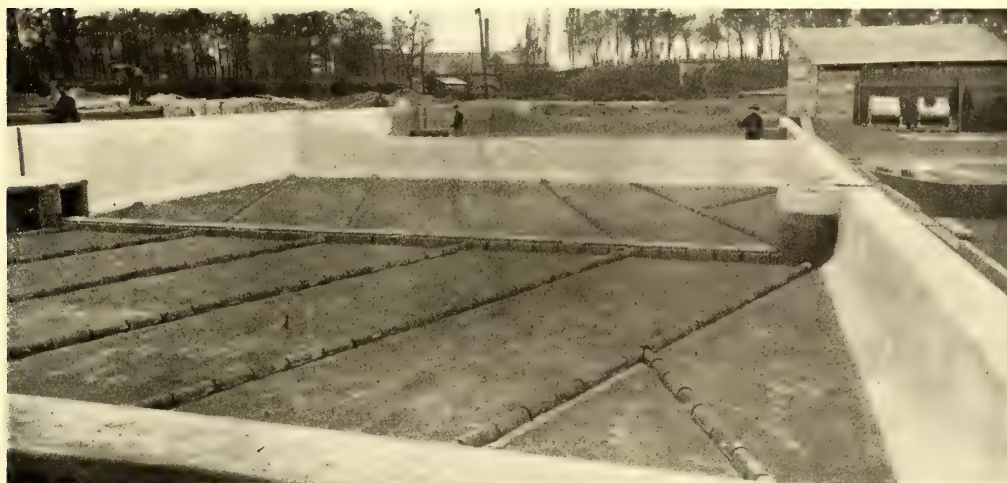


Septic Fosses at La Madeleine-les-Lille



Bacterial Bed with Fiddian Rotary Distributor at La Madeleine-les-Lille

the foss is the seat of very active anaerobic fermentation, in consequence of which a portion of the deposit is dissolved and another portion is converted into gases, chiefly formene and hydrogen, which are evolved in great quantities. Hence the sediment does not accumulate and fill the foss. Dr. Calmette found only about 200 cubic feet of mud in a septic foss of nearly 9000 cubic feet capacity, at La Madeleine, after a year of service, during which 102 tons of solid matter in suspension had entered the foss. This result shows the great effect of bacterial action in decomposing and dissolving sediment. Part of the dissolved organic matter is also disintegrated in the septic fosses. Altogether half the organic carbon is evolved in gaseous form, and much of the nitrogenous matter is converted into ammonia. The water which flows from the fosses is still filthy and foul-smelling, but it holds no matter in suspension.



Bacterial Contact Bed at La Madeleine-les-Lille

In this condition it goes to the bacterial beds for further purification. These beds are rectangular basins about 4 feet deep and from 10,000 to 20,000 square feet in area. The bottom is covered with concrete, slightly inclined, and has a system of tile drains. The basins are filled with coke or slag broken to a diameter of one or two inches, with a bottom layer, ten inches thick, of fragments from two to four inches in diameter. The water, distributed by sluices, flows in little rivulets over the entire surface of the bed.

These bacterial beds may be operated either by "double contact" (intermittent system), or by percolation (continuous system). In the intermittent system there are two sets of beds, to which the water goes in succession, remaining two hours in contact with each set. After the beds are emptied they are left exposed to the air for four hours before being used again. The cycle of operations of each bed comprises eight hours, thus: one hour filling, two hours filled, one hour emptying and four hours airing. Thus each bed is used three times in twenty-four hours. It takes a volume of water equal to one-third of its cubic capacity, and it is estimated that, for average conditions, a total surface of five-eighths of a square foot, including the beds of first and second contact, is required to purify one cubic foot of water per day. Therefore five acres would suffice for a city of 100,000 inhabitants with a daily sewage flow of 350,000 cubic feet.

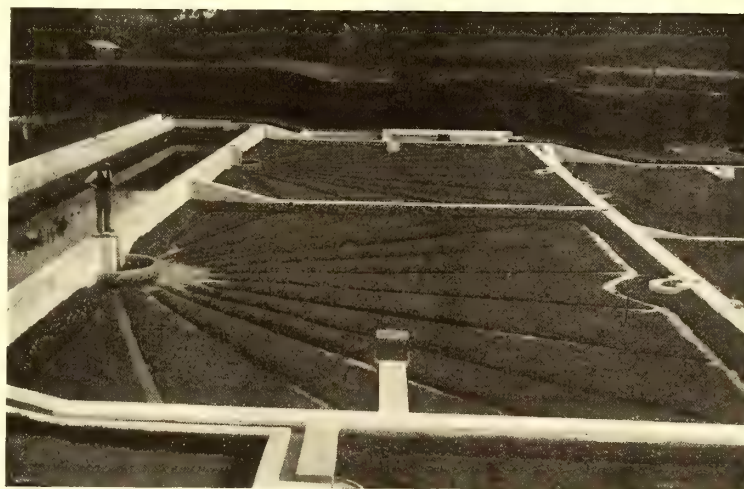
The changes which occur during these operations are very complex. When the beds are flooded the slag appears to extract the dissolved organic matter as fibers extract dyes from their solutions. Meanwhile the disintegration of the organic matter by the bacteria continues, but the deposit on the slag is attacked and decomposed still more energetically during the period of aeration. The products of decomposition are carbon dioxide water, nitrogen and nitrates, for the

ammonia which is formed at first is oxidized and converted into nitrates by certain bacteria called nitrifying ferments. In this way the slag is freed from the adhering coat of organic matter and made ready to form a new deposit during the next immersion. On leaving the first bed the water is of good appearance and considerably purified, and when it leaves the second bed it has parted with from seventy-five to eighty-five per cent. of its organic matter. In this condition it is clear, odorless and not liable to become putrid. Fish thrive in it and it can safely be thrown into streams.

This intermittent method has the advantage of being very simple and requiring no machinery, but the output per square foot of surface is still rather small. To increase it attempts have been made to make the flow continuous without suppressing the indispensable aeration of the beds. This result is obtained by employing pressure sprayers, hydraulic tourniquets, inverting droppers or intermittent siphons.

The bacterial beds are made six or seven feet thick, and complete purification is obtained with a single bed. In the first system the water falls continuously, in a fine rain, upon the slag from spraying nozzles distributed over the surface of the bed, through which it percolates slowly and emerges in a purified condition at the bottom. The apparatus is costly and is frequently clogged, but the purification is perfect and the output exceeds three cubic feet per square foot per day.

The hydraulic tourniquets or rotary sprinklers are based on the same principle. The whole surface of the bed is



Flooding a Bacterial Bed of First Contact at La Madeleine-les-Lille
Part of Second Contact Bed Is Shown at Right

sprinkled by a single central apparatus with two or four hollow and perforated arms. In this system also the purification is perfect, and the output is nearly four cubic feet per square foot per day. But here, too, the apparatus is expensive and liable to stoppages. Besides, it is often disturbed by the wind.

The inverting droppers usually consist of a wheel carrying buckets which empty themselves on the bed. The wheel automatically moves forward at each emptying and so the entire bed is watered. One of the best devices of this class is Fiddian's rotary distributor, which gives results as good as those obtained with sprinklers and works with much greater regularity.

Finally, the intermittent siphons devised by Dr. Calmette are simply siphons which fill automatically at the expiration

of a variable period of time and suddenly discharge definite quantities of water on the bed at regular intervals. This very simple apparatus, which is much less costly than those described above, gives excellent results. The purification is perfect and the output exceeds three cubic feet per square foot per day.

These biological methods have been applied in recent years to factory waste as well as to sewage. In many cases, however, substances that would prevent the bacterial action must first be removed by a chemical process.

From all the above it appears that the choice of a method of purification should be influenced by the chemical composition of the water to be treated, its quantity and the nature of the ground on which the purification is to be effected. On reviewing the merits and demerits of the various systems it appears evident that chemical methods should be reserved for factory wastes heavily charged with grease, dyes or antiseptics. Irrigation of cultivated land with sewage is suitable only for cities near which very large tracts of porous soil can be obtained cheaply, for the yield, by this

method, is only about .01 cubic foot per square foot per day. Intermittent filtration, which yields a maximum of .14 cubic foot per square foot per day, should be reserved for cities which have in their vicinity sandy plains unfit for cultivation. When none of these three systems seems applicable, which is very often the case, recourse must be had to biological methods. If the volume of water to be purified is very great and the available space is not very small preference should be given to the intermittent or double contact system, which works with great regularity and requires no machinery. It does require, however, a fall of about eight feet from the inlet of the septic fosses to the outlet of the second bacterial bed. The yield is 1.6 cubic feet per square foot per day. If the volume of water to be treated is not very great and the site and height of fall are limited, one of the continuous or percolating systems may be employed. The fall required is about six feet and the yield is about 3.3 cubic feet per square foot per day. This system is especially desirable for small towns and for barracks, schools, hospitals and other public institutions.

The Summer Home of E. C. Richardson, Esq.

Concluded from page 303

tea-table of the same make, and is brightened by pots of flowering plants. It is one of the most delightful spots in the house.

The garden below is an English formal one, inclosed by a retaining wall of stone. It was laid out under the supervision of Ernest Bowditch. The central feature is a broad reach of unbroken sward. Around this is a bricked and terraced walk, with a band of sward around its outer edge, outlined by a smooth row of dwarf box, for which border it is interesting to know that no less than seven hundred and twenty-five individual plants were required. A row of five bay trees stands along the side of the walk, three others trained to a pyramidal form are the sentinels of the opposite boundary. This garden is semi-circular at the end. In the curved portion the brick wall has been extended around a small part of the sward, in the center of which stands a small sun-dial surrounded by herbaceous plants. At either end of the entrance to the garden and adjoining the house are the flower beds, one of scarlet geraniums. The trellises at the sides of the porch are covered with wistaria, honeysuckle and other flowering vines.

At the left one passes down stone steps to the rose garden, which is laid out into formal beds. Most of these are brilliant with wealth of blossoms. At the end are golden glows, marigolds, phlox, zinnias, and mignonette. The border nearest to the wall is occupied by a bed of iris, while at each side of the steps are white Lawson and yellow rambler roses. At the farther end is a trellised seat, over which vines are being trained; already, though it is only the second year of their growth, they are becoming luxurious. The inner garden of roses is inclosed by a trellised fence in green and white, along the outside of which extends a long row of hollyhocks, Dutchman's pipe and carmine pillar roses. The rose beds at the left contain hybrid and perpetual roses planted in five rows, each two shrubs being two feet apart. The beds on the right contain also fifty-nine hybrid perpetual rose shrubs in five rows and a number of sweetbriar roses. During the season of their blossoming the beauty and fragrance of such a garden as this can be more easily imagined than described. Altogether the house and its grounds deserve to be considered examples of graceful architecture and tasteful landscape gardening.



Fireplaces for the Summer Home

By Esther Singleton



THE need of a fireplace, both useful and ornamental, is inherent in the descendants of the settlers of this country. Even in New York, where thousands of flat-dwellers never see the cheerful blaze of the hearth, the tradition is kept alive in steam-heated apartments by the introduction of so-called decorative chimneypieces—a practice which would make Mr. Ruskin and his followers rightfully shudder. In the country many homes of people



1—A Brick Fireplace in a Hall



2—A Simple Shelf Affixed Above the Fireplace Takes the Place of the Former Elaborate Mantel

of moderate means are heated with a furnace in the cellar conveying hot air to the rooms, while the meals are cooked on a kitchen range. Of late years, however, people who like to spend a few months of the year in homes of their own in the country, have returned to the custom of their English, Dutch, and French forefathers and warm the rooms with open fires of blazing logs.

An old English saying was that the way to build a house was first to construct the massive chimney and then build the house round it. With the central mast of brick and stone firmly planted in the ground, the rooms could then defy the assaults of frost and tempest.

The well-to-do of our great cities, if we may believe the wails of the suffering tradesman, show an inclination to protract their residence in their country homes later year by year, some not returning to town till the approach of Thanksgiving. The pleasures of the fireside, therefore, on rainy days and chilly evenings are greatly enhanced by the artistic form and decoration of the chimneypiece and hearth with its furnishings. Architects have not been slow to cater to the taste for chimneypieces in the old English style and that of the Dutch as shown in the pictures of the great masters. In many localities the land yields in numbers all too plentiful cobbles of various forms and sizes. These, in



3—The Stones of Which this Fireplace Is Built Were Carefully Selected for Color and Size



4—An Artistic Chimney Built of Cobble-stones and Provided with An Inscribed Mantel

combination with brick, are in great favor nowadays in the construction of massive chimneys. Their various colors and shapes produce a pleasing mosaic effect and a satisfying sense of solidity. These are in great favor, especially with artists who go to the country and build studios in which to pursue their work face to face with Nature. A fine example of the primitive type of chimney is shown in Fig. 3. If the floor had been tiled instead of planked no fender would have been requisite; and this would have added to its impressiveness. A very artistic chimney built of cobble-stones is that of Fig. 4. Here the brick front of the hearth renders the fender unnecessary. The handsome wooden paneled and

bracketed mantel, with its hospitable inscription, adds greatly to the attractiveness of this chimneypiece. A fine variously colored brick chimneypiece of old Dutch model is reproduced in Fig. 1. Its hearth is decorated with tiles geometrically disposed. These three are wide, and calculated to warm and cheer the halls and large general sitting-rooms, so much in favor in country houses. For the decoration of a smaller room a handsome brick and stone chimneypiece is reproduced in Fig. 2. The iron work supporting the majolica shelf and framing the niche and the decorative metal work of the andirons and fireplace are very artistic and worthy of notice.



The Garden of T. Jefferson Coolidge, Esq.

Magnolia, Massachusetts

By William Taylor



THE chief element of Mr. Coolidge's place at Magnolia is its garden. It is at once a distinction and a glory. The house itself is an old white rambling structure, which probably Mr. Coolidge himself would be the first to admit to be without interest. It is simply a good old house, amply sufficient for the summer home of its owner and a very good base from which to observe and to enjoy the beautiful garden that has been created across the lawn before it. A formal garden has, of course, nothing to do with an old New England homestead, and a building of this type in immediate juxtaposition with a garden laid out in formal style, decorated with formal paths, with statuary and with other adjuncts of the architectural garden, would exhibit such a singular and heterogeneous arrangement of ideas as to be completely at variance with the most ordinary rules of artistic unity. Mr. Coolidge has, therefore, placed his formal garden at some distance from his house, screened it with plants and walls, and made it a spot completely apart. Two purposes were thus accomplished: the house was thoroughly dissociated from it, and hence any idea of incongruity in building was immediately dispensed with; the garden was strengthened and bettered in every way by its isolation, for one standing in its midst saw the garden only and took no thought of the house.

The formal garden has become so exceedingly popular in this country that comparatively few country seats are now built that do not exhibit it in one form or another. In many instances the proper relationship of the formal garden to the house is completely ignored, for any sort of a house is apt to have one attached to it. Mr. Coolidge has followed out the

only wise course by thoroughly separating his garden, not only from the grounds immediately surrounding it, which in itself was a proper and natural thing to do, but also completely divorcing it from his house, which, while also proper and natural, is much less seldom done. It is well to dwell somewhat on this point, since a garden must not only have interest as a garden, but convey to others lessons of more or less practical import.

Standing on the entrance porch of the house, one sees to the right a rustic pergola bordered with evergreens on its outer margin. On the left is a rustic arch thickly overgrown with vines, which forms an entrance to the garden. The rustic archway is quite in keeping with the simple character of the road from the house, but immediately within it one enters upon a new world. The garden path gives way to a bridge which is paved with brick and which is reached by stone steps, rising again at the further side, where the path is continued to an arbor or summer house at the further end of the garden.

This bridge spans a beautiful brook completely hidden in foliage and colored shrubs, beneath which you hear its gentle murmur. The borders beyond are ablaze with blooming plants brought to a high degree of cultivation. At the far end is the arbor, thickly overgrown with wistaria. On either side are marble urns, and within the shaded interior is a marble table.

The walk to the arbor, while it commands two chief points of interest, namely, the brook and the arbor, separates the garden into two entirely distinct parts. On the right are rows of old-fashioned flowers for picking, like foxglove, gladioli, sweetpeas, and further on a quantity of rose bushes of every variety. On the left is the formal garden proper at a somewhat lower level, reached by short flights of stone



Urns Are Tastefully Placed Among the Flowers



Looking Toward the Arbor



Venetian Well-head



Steps to the Garden



The Fountain



Marble Seat



Steps



The Sun-dial In the Midst



of Neptune



The Lion Before the Door



Seat



The Bounding Walk



Looking Toward the Arbor



Arbor and Steps



The Sun-dial In the Midst



Venetian Well-head



The Fountain of Neptune



The Lion Before the Door



Steps to the Garden



Marble Seat



The Bounding Walk

The Garden of T. Jefferson Coolidge, Esq., Magnolia, Massachusetts

steps. In the center of this sunken space is a sun-dial, standing on a fragment of an antique column planted on a small circle of grass. This is actually the center of a vast square bounded on all sides by a raised walk and reached by steps. The whole of this surface is a mass of blooming plants arranged in huge beds, giving a wonderful effect of color, and presenting a most entrancing quantity of bloom. The predominating quality of this garden is its intense floral activity. The masses of the plants are so great, and the plants themselves brought to such a high degree of cultivation, that the effect is one of almost overpowering brilliancy.

A high brick wall separates the formal garden from the avenue to the house. The main path that is directed toward it

leads to a handsome fountain against the wall, surmounted by a statue of Neptune. Water lilies grow in the lower pool, and before it at the side of the steps are two fascinating old leopards of Venetian marble. The trees on either side of this fountain and those beyond the wall make an effective screen and background. As one stands near the sun-dial the foreground is filled with great beds of flowers. Beyond are the steps with the guarding leopards. On either side are raised beds of flowers, indicating the margin of the path that runs above the outer edge of the garden. And then beyond,



The Masses of Plants Are So Great, and the Plants Brought to Such a High Degree of Cultivation, That the Effect Is Brilliant

in its surroundings of richly leaved trees, is the fountain standing against the brick wall, which is here raised to suitably support it. On the left, overlooking the brook, one has a beautiful and ever-changing view of the ocean stretching for miles toward Marblehead.

The bridge is but the entrance, and does not form a part of the immediate scheme of the formal garden. The arbor at the end of the path from the bridge is itself so embowered with vines and trees as to be hardly more than an outline in the general mass. The low brick wall that surrounds the garden is simply a support to the bounding paths, and is terrace-like in its effect. The outer wall of brick that shuts in the garden from the avenue is scarcely more than a necessary screen.

The fountain of Neptune is thus a fitting climax, and an exceedingly happy one, to the symmetrical development of the garden. It is interesting to note that fine as this garden is, its chief dependence has been upon the plants within it rather than upon the architectural frame or sculptural adornment that are usually given to formal gardens.

Hence it is a true garden of plants and flowers, and offers a distinctive quality that the architectural garden, burdened with structural embellishments, does not offer. The latter have here their place, but it is a true place.



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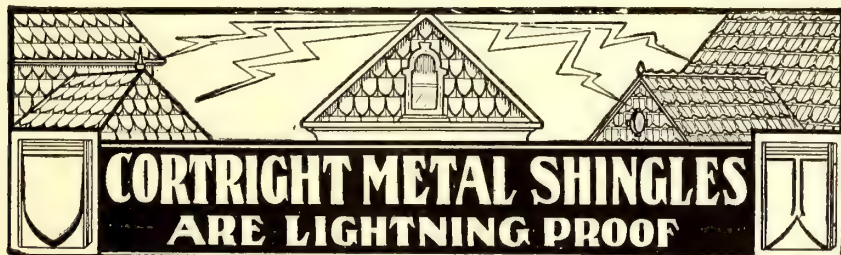
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AB8

GARDEN WORK FOR AUGUST

By Eben E. Rexford

PERHAPS more strawberry beds are made this month than at any other time during the year. Most successful growers of this fruit consider it the time when all things can be done to the best advantage. The ground is, or can easily be put, in excellent condition. Young plants, from runners, are stronger than at any other time during the year. If set now, and set well, they begin to grow almost immediately, and become large, thrifty plants before the coming of cold weather.

The ground should be spaded thoroughly to the depth of at least a foot. It should be made quite rich. The ideal manure for strawberries is found in old, rotten material from the cow-yard. Spread it over the bed to the depth of three or four inches, and then work it into the soil, which is not in proper condition for the reception of the plants until it is fine and mellow.

Pretty nearly every grower has his own ideas about distance between rows, and distance in the row. Some advocate close planting and high culture, others would give more room to the plants, and use less manure. I have made my rows about three feet apart—just far enough, in fact, to give comfortable working-space between them—with the plants about a foot apart.

I would advise purchasing plants from the dealers who have made a reputation for growing only the best varieties, and growing them well. There are irresponsible dealers all over the country who offer plants at low rates, claiming them to be true to name, and equally as good as those for which the dealers with a reputation to live up to will ask considerably more.

If plants are procured by mail or express, open them as soon as they arrive, and set their roots in a pan of water. Aim to get them into the ground as soon as possible. In planting, spread their roots out naturally and press the soil down upon them firmly with the foot, bringing it up well about the crown of the plant. Water well, if the season is a dry one.

* * *

Tomatoes ought to be well set with fruit now. To hasten development, and throw the strength of the vine into the production of fine fruit rather than large quantities of inferior quality, cut off the ends of the large branches. Some varieties have very thick, luxuriant foliage, which will prevent the sun from getting to the fruit. Remove a good deal of this. Sunshine will not only hasten ripening, but it will give a finer flavor.

* * *

If celery is wanted for early use, begin the bleaching process at once. Some bank up about the plants with earth, first drawing the leaves and stalks closely together. Allow only the leaf-tips to project above the banking. I prefer this method, because the contact of the soil with the plant results in greater crispness and superior flavor. But some amateur gardeners claim to have the best success in blanching by setting up boards at least a foot wide on each side of the row. Set these close to the plants, that as little light as possible may penetrate below the leaf-tops. The more light there is, the more color there will be in the stalks. Earth keeps out all the light, therefore the stalks of plants so treated will be perfectly white, and much more attractive in appearance than stalks that show a mixture of colors.

* * *

Winter squashes are often failures, in a sense, because they are not given the attention they deserve. It is the habit of this class of

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Extract from Preface

The author has endeavored to include characteristic designs in vogue to-day, and to give reliable information as to the choice of wall papers as well as to describe the practical methods of applying them. In dealing with matters concerning decoration there is always the danger of leaning too much toward an ideal and of overlooking the practical requirements of commercial life. The author hopes that he has been successful in avoiding this fault, and that his book will be regarded as both practical and useful.

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plants to keep on blossoming and setting fruit until frost comes. The consequence is that we seldom get any really fine specimens from a plant. The strength that should be concentrated in a few good squashes is fritted away on a score or more in all stages of development. To prevent this, keep the plant from setting any new fruit after it has set its first half dozen. Nip off the buds as they form. This will throw all the strength of the plant where it belongs, and you will have some fine squashes to show for your season's work, when fall comes, instead of a lot of small, inferior-in-every-way specimens, such as characterize the plant which is allowed to follow out its own inclinations.

* * *

Radishes, spinach and other vegetables of quick growth can still be sown for fall use. Give them the warmest corner of the garden, and a very rich, mellow soil. You can not grow good ones, at this time of the year, unless you give them special attention.

* * *

Chrysanthemums should not be pinched back after buds begin to form. Only the earliest varieties will show buds this month. Keep the plants well tied up. A little neglect, at this time, may cost you the work of the entire season. Few plants have more brittle stalks, and one must handle them with the greatest caution to avoid breaking them, especially if they have formed heavy heads.

* * *

Next month your plants will have to be lifted and potted. Begin to get ready for the work now. Get your pots. Let their sizes range from nine to twelve inches. If they are new ones, soak them for a day or two before putting plants into them. Provide some good potting soil. Not much will be needed, for you will lift your plants with a good deal of earth adhering to their roots—quite as much, in all probability, as can be crowded into the pot—but sometimes some of this soil will crumble away in spite of all your care, and it should be replaced with fresh, strong compost. Provide yourself with good, strong supports for each plant. These should be put in place as soon as the plant is in its pot to guard against possible accidents in moving. Insert them close to the stalk and tie the plant securely with strips of cloth instead of string, as is usually done. String is likely to cut into the stalk if tied tightly, and unless it is tightly tied it does not furnish the necessary support.

* * *

At this season it is well to look the garden and grounds over with a view to making changes that will result in improvement. Mistakes will no doubt be in evidence on every hand. Study the habit of your plants, and try to find the place that will enable them to display their charms to the best advantage. The ideal garden is always an evolution. It grows by slow degrees. Plan it ever so carefully, at first, and you will find that a good deal of it has to be made over before it satisfies you. It takes time to find where all the plants in it belong.

* * *

Next month will be bulb-planting time. But don't wait until then to get ready for your bulbs. Prepare the ground now. Spade it up to the depth of a foot—a foot and a half would be better—and work it over and over until it is as fine as it can be made. Make it rich with well-rotted cow-manure. Let the beds slope away in all directions from the center, that rain may run off rather than settle into them.

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earlier in the season you get them, the stronger they will be likely to be, as they part rapidly with their vitality while out of the ground. Aim to have everything in readiness for them on their arrival, and put them into the ground as soon as possible. The catalogues will tell you how deep and how far apart to plant them, and give you such other particulars as you may stand in need of. You will find it most satisfactory to plant the various colors by themselves. Mixed collections give too bizarre an effect to be pleasing to those who have a keen eye for color-harmony.

* * *

Tea and hybrid perpetual roses should be given a good deal of attention in order to secure a late crop of flowers. The treatment is about the same for both. Make the soil rich, in order to encourage growth. Cut back the branches to some strong bud. This will develop into a branch, from which you may hope to get flowers. Your hope will not always be realized, with the hybrid perpetuals, but you may reasonably expect it to be with the teas, which often keep on flowering until the ground freezes.

* * *

I cut back my pansies in July and August, clipping away nearly all the old top. Not much growth will result while the weather is hot and dry, but as soon as cooler, damper weather sets in, the plants will make rapid development, and in September and October, and often until late in November, they will yield fine crops of blossoms.

* * *

Cosmos will be rapidly forging ahead now. So luxuriant is its growth that quite likely it will need some support. I have had large plants of it almost ruined by sudden winds, because I had neglected to give them the proper attention. Like the dahlia, it has a very brittle stalk, and its foliage is so heavy, especially when wet with rain, that they are almost sure to split down under the weight of it.

PAINTING THE HOUSE

By George Ethelbert Walsh

REPAINTING the country house is one of the necessary evils of modern existence which periodically recurs with the certainty of passing time. The double function of preserving the woodwork and beautifying the house is achieved through the proper selection of paint to harmonize with the surroundings. Fortunately our tastes differ in paint as in everything else of external use, and general variety of landscape effect is thus unconsciously produced. The old Colonial homes with their pure white exteriors and green blinds suggested a purity of composition that can not be excelled, but unending rows of houses of glaring white grow monotonous to the eye. We wish for some other color—something vulgar even—to break the monotony or to intensify the chastity of the conventionally painted white-and-green house. To-day all the colors of autumn's landscape appear in the scattered country homes and clusters of village houses, and while the combinations of some may be atrocious the general effect of variety is pleasing.

We tire of one color in a house as we grow weary of one shade of dress or hue of wall paper. Very few paint the house the same color the second time. It is a white house this year, a terra cotta with cream trimmings next, and then a grass green that seems to spring out of the very ground. The individuality of the house is not changed by a fresh coat of paint, but when it dons its new dress it seems to take a new lease of life, re-



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newing its youthfulness with the passing seasons. By general consent the autumn is chosen as the most appropriate season for painting the house. Exigencies of business and household necessity may induce some to paint in the spring, but the best results are obtained in late autumn. The dry October weather is best suited for such work. The summer's swarm of insects have disappeared by that time, the air and sun are soft and drying, rains and storms are infrequent, and the dust of summer has been laid by the September showers. Moreover, the woodwork of the exterior has had ample opportunity to part with all surplus moisture, and it is in excellent condition for treatment with paint. Painting the house is a serious problem which involves many considerations as to artistic choice of colors, the suitability of climate and surroundings and the selection of the paints of right texture and composition.

How often does a house require painting? This is not to be answered arbitrarily. A cottage near the seashore may require painting every second year, while another located in a dry climate can go three or four years without a renewal of its outside coat. It is a mistake to let a house go until it begins to look as if it needed painting. Before the house begins to look shabby the property begins to deteriorate. When the paint begins to be powdery, or brittle, or porous, it needs renewal at once. The best way is to test the paint with the finger or knife. If the old paint chips off, or soaks up water, or can be rubbed off in a powder by the finger, the time has passed when the paint protects the wood. Underneath the paint the wood is disintegrating. Wood that is properly painted will practically last forever, but if not so protected it rots rapidly. Paint is thus an insurance just as important as that represented by a fire insurance policy. Lumber is more expensive than paint, and carpentry work more than either. The most important part of all paint is the linseed oil which is used to dissolve and mix the pigments, and so long as the oil lasts the paint protects the surface, but when the oil is "dead" the old paint has lost its protective value.

The composition of paint should thus be clearly understood in order to meet this question intelligently. The body of good paint consists of either white lead or oxide of zinc, or the two mixed, with such inert materials as gypsum, whiting, silica and barytes, and the various coloring pigments, such as lamp and bone black, red iron oxides, Prussian blues, ochers and chromes, umbers, siennas and other mineral elements. The universal solvent of these materials is pure linseed oil. There has never been found any adequate substitute for linseed oil, but many adulterated oils may be employed in cheap paints. Petroleum oil, cottonseed oil, fish oil and rosin oil are sometimes used as adulterants, but they never serve the purpose as satisfactorily as pure linseed oil. As a rule the paint which requires the greatest amount of linseed oil for its proper application is the most durable in color and use. Where quick drying is essential turpentine and benzine are often mixed with the paints, but these decrease the amount of oil and thicken the coat of pigments, and they give a "dead" surface which never lasts long.

Good paint can not, therefore, be tampered with, and it is much greater economy to have the work done in the mild, warm, dry days of autumn, when no artificial "dryer" is needed, than to hurry the work in the spring to avoid hot, blistering weather or a week of rain.

The house to be properly painted must be in a suitable condition. If the house is a new one the surface of wood must be dry and all sappy and knotty places covered with shellac

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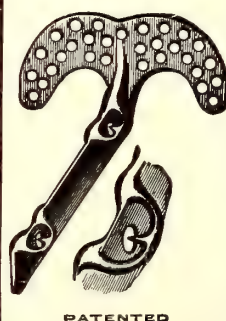
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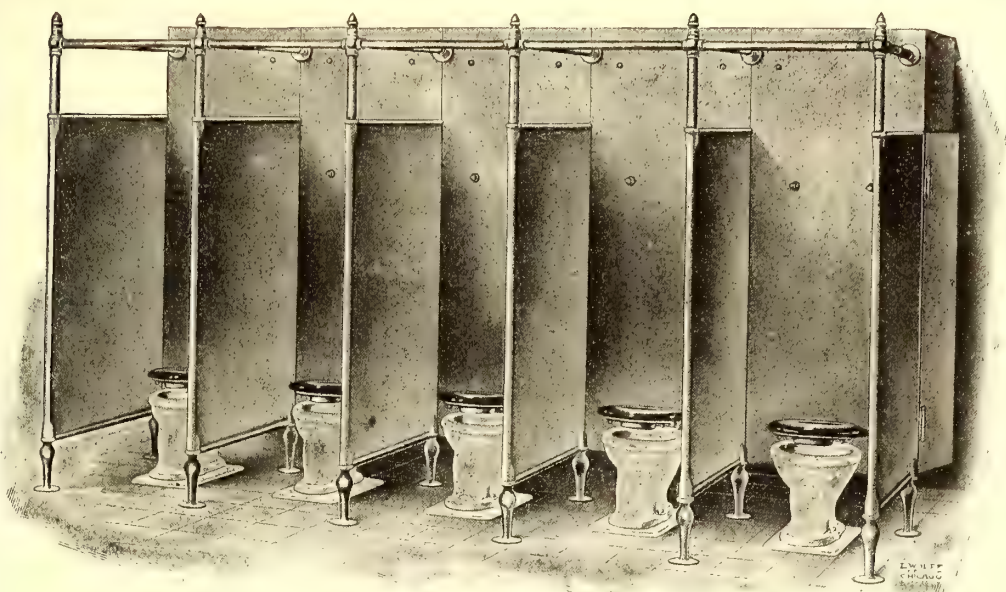


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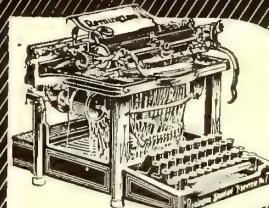
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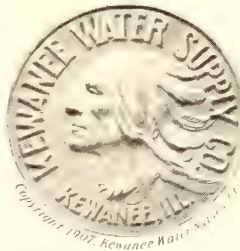
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in advance. Dryness of wood and weather are essential for painting either a new or old house. Even damp, foggy days will sometimes prevent paint from soaking properly in the wood and thus anchoring the whole coat. In repainting an old house all loose paint must first be removed.

We have a great variety of pleasing colors to select from to-day, but of the list of natural and artificial pigments comparatively few colors are really durable. It is not a satisfactory work to select a pleasing combination of tints, and then find after a few months that the colors have faded, leaving a decidedly blotched appearance. Permanence of colors as well as durability of the coat of paint are desirable. A color scheme, no matter how beautiful, if it quickly fades, must only serve to exasperate. The aniline lakes furnish the most brilliant and most delicate shades and colors, but they vanish when exposed to the sunlight almost as soon as the paint has dried. Few conscientious architects specify these for good work. They are used in some cheap paints intended to catch the eye, but in a very short time the light tints have darkened and the darker shades have faded or altered. The only durable, unfading dark pigments are the several lamp, gas and bone blacks, and the only suitable white pigments are white lead and oxide of zinc. With these latter marble dust, whiting, silica and other adulterants are often mixed in considerable proportions, thus destroying the quality of the paint. The iron oxides form the most durable of red pigments, but beautiful aniline dyes are often mixed with them. The dyes fade quickly and the color scheme is lost. Of the yellow pigments the ochers are more durable than the chromes, but the latter are brighter. The Prussian blues and ultramarines are not very permanent unless combined with oxide of zinc. The green shades are generally produced by combinations of Prussian blue and chrome yellow mixed with such inert pigments as barytes, and they hold their colors moderately well when mixed with sufficient oxide of zinc. The mineral browns of umber and sienna are very durable.

It is possible to secure a good color scheme with these durable pigments, but brilliancy of effect generally means quick fading. Our natural love for rich, delicate tints deceives us into accepting a color scheme which can have no permanency. The new house built for speculative purposes to catch the unwary is frequently bedecked with rich colors that fascinate the eye, but like many other features of such cheap houses the outside appearance of beauty is barely skin-deep. Paint can cover a multitude of sins.

The cost of painting is always a question which seriously concerns the householder. It is a charge against the property, which, like insurance, taxes and general repairs, should be apportioned in advance over a series of years. The real estate agent never calls attention to this charge when he tries so hard to show a possible client how little it will cost to maintain a modest little wooden home in the country. Taxes are easily apportioned, interest on the investment is a fixed quantity, street, sidewalk and water improvements can all be anticipated, and general repairs figured down to a nicety. But painting!—that is so far in the future that it is rarely considered by the novice eager to own his home. But at the end of the second year the freshness of the paint is a little dimmed by exposure to wind and storms, and by the third season the house begins to look "genteelly shabby." The house is crying aloud for a new suit of clothes. It needs paint to retain its self-respect, but more than that it demands paint to prevent "dry rot" in the very bones of its structure. The insidious work of decomposition attacks pillar and post, and finds its way among the large timbers



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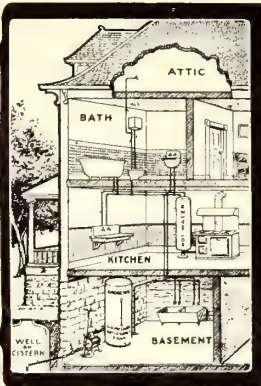
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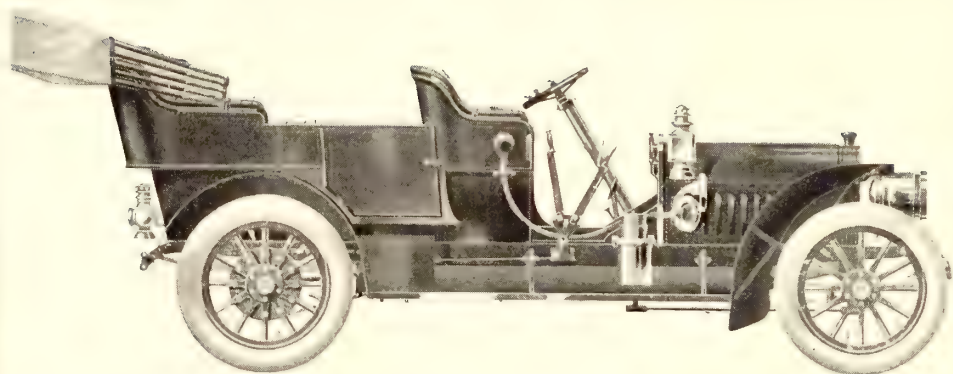


which are so expensive to replace. To prove this, scrape away the paint of a house three years old under the cornices, beneath the piazza pillars, or beneath the side sheathing. The surprise which will greet the eyes will convince the most skeptical that repainting is badly needed.

In attempting to figure upon the cost of repainting it is essential that an approximate number of square feet of the house should be ascertained. This is easily obtained by measuring the height and length of the structure and multiplying them together. Painters have rules for this work which they apply somewhat rigidly, always making plenty of allowance for errors. Thus all openings, such as windows and doors, are figured upon as plain surfaces to be covered with paint, although no part of them other than the sills and sides are touched with paint. All moldings, beads, strips, columns and pilasters are figured separately, allowing nothing less than a foot in width for anything, and multiplying this by the height or length of each piece. The estimator thus always has sufficient leeway for loss through slow work in painting fancy work. If a house has much broken fancy work in front a further liberal allowance for covering is made.

In the ordinary house the number of square feet of plain surface to be covered with paint should be ascertained, and then one-third of this should be added to make up for special painting around columns, window frames, doors and similar parts. Good exterior paint costs all the way from \$3 to \$5 per gallon. One man will, as a rule, put on the prime coat at the rate of about one hundred square yards of a new house in a day of nine hours, and for painting the second and third time he will cover not more than seventy-five yards in a single day. The master painter figures usually on new work costing seven cents per square yard for each coat of paint, including knotting, puttying and material. Varnishing and oil finish for the inside of piazzas and vestibules, the cost is generally higher, ranging from ten to twelve cents per square yard. The materials required for all this work depend a good deal upon their quality and ability to spread. For the priming coat twenty pounds of white lead and four gallons of linseed oil are usually considered about right for each one hundred square yards. For two coats forty pounds of white lead and eight gallons of linseed oil will answer, and for a three-coat work fifty pounds of white lead, twelve gallons of linseed oil, one pound of putty, half a pint of knotting, and three to four pounds of coloring pigments generally answer.

The universal use of ready-mixed paints makes it imperative that a word should be said concerning them. Good ready-mixed paints are made with oxide of zinc and white lead, and with many kinds of pigments. There are sufficient varieties of ready-mixed paints for interior and exterior use to confuse the novice in selecting them. Substitutes used in these may not always be harmful, but reputable manufacturers will guarantee that their paints are free from alkali, water, and petroleum products, and that they contain a fair proportion of zinc and white lead. There are several tests which one can apply to these ready-mixed paints to ascertain their relative value. One of the simplest to find the presence of alkaline emulsifying agents is to leave in the paint over night a strip of gelatine. If there is water and alkali adulterants, the strip of gelatine will swell, but if not, the paint is practically free from water and alkali. The presence of aniline dyes, which have no permanency, can be detected in the ready-mixed paints by shaking up separate lots of the paints with chloroform, ether and benzene. Then let the pigments settle, and the aniline dye will



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remain in solution, staining the solvent. One may in this way protect himself from adulterated paints and from aniline dyes, which spoil the best color scheme. These tests might be applied over night to the paints used by a contractor who mixes his own paints and guarantees to employ only the best materials. The alkaline emulsifying agents are the adulterants most commonly used, for they permit the introduction of cheap petroleum products and water in place of pure linseed oil.

THE HARDY HEDGE AS AN ORNAMENTAL FEATURE OF THE LAWN

By Ida D. Bennett

WHERE any attempt at formal gardening is undertaken or it is desired to have a garden that shall be something more than scattered beds about the lawn or the foundations of the house, the planting of some sort of a hedge becomes of first importance. Where no massed plantings of evergreens or hardy shrubbery is attempted along the boundaries of the lawn, the hedge of hardy shrubs may take its place to advantage, but it will especially be advisable in affording privacy to the garden, to the service part of the grounds, and to cut off from the flower garden that part of the grounds allotted to the kitchen garden when they are in close neighborhood, as must be the case on the city lot or the grounds of moderate dimensions.

The evergreen hedge has long been popular, and has the advantage of being always sightly, even in the depth of winter. Their merit, however, ends with their evergreen character, as they occupy an amount of room that one often feels can not be spared, and there are few flowers or plants which will thrive in the immediate vicinity of an evergreen hedge. There are situations, however, where nothing can take the place of evergreens, whether grown as a hedge or massed in long beds or lines.

For a prominent position along the lawn there is nothing better than a hedge of hardy flowering shrubs, and there are several varieties of this class of plants which are all that can be desired in this direction, being both ornamental in foliage and beautiful when in bloom.

The finest shrub for ornamental hedges is undoubtedly the hydrangea paniculata grandiflora, which blooms late in August and continues well into or late in September. The paniculata requires plenty of room, and should be planted at least five feet apart if large plants are set, smaller plants being set three feet apart in the row, and as soon as they have grown sufficiently to fill up the gap between them every other plant should be taken up and set elsewhere. The remaining plants will then quickly fill up the gap, usually in one season, and the plants removed may be used to extend the hedge or to start a new hedge elsewhere.

The plants should be pruned severely early each spring, cutting back about two-thirds of the new growth; in this way larger blooms are secured and stockier plants. Well grown plants should always be broader than they are tall. Any good soil, well manured, suits the hydrangea, and a heavy mulching of manure late in the fall, which may be partially removed in the spring, and the finest forked into the soil and the earth covered heavily with lawn clippings through the summer, should keep the hedge in condition to bloom generously, especially if not allowed to suffer for water at any time.

Hydrangeas are increased by cuttings, which may be stuck in damp sand in a warm, sunny position, and will furnish plants which may be set out where they are to remain, in the fol-

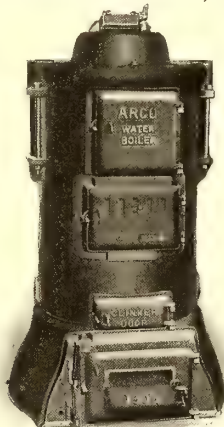
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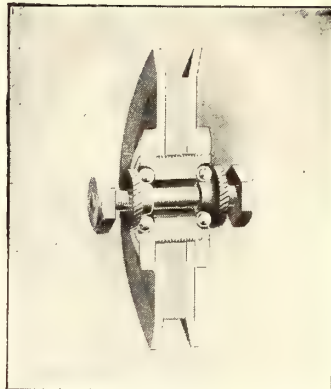
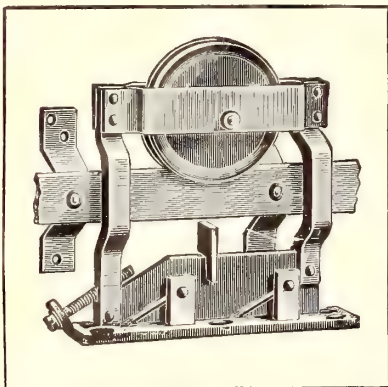
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SCIENTIFIC AMERICAN SUPPLEMENT 1538 gives the proportion of gravel and sand to be used in concrete.

SCIENTIFIC AMERICAN SUPPLEMENTS 1567, 1568, 1569, 1570, and 1571 contain an elaborate discussion by Lieut. Henry J. Jones of the various systems of reinforcing concrete, concrete construction, and their applications. These articles constitute a splendid text book on the subject of reinforced concrete. Nothing better has been published.

SCIENTIFIC AMERICAN SUPPLEMENT 997 contains an article by Spencer Newberry in which practical notes on the proper preparation of concrete are given.

SCIENTIFIC AMERICAN SUPPLEMENTS 1568 and 1569 present a helpful account of the making of concrete blocks by Spencer Newberry.

SCIENTIFIC AMERICAN SUPPLEMENT 1534 gives a critical review of the engineering value of reinforced concrete.

SCIENTIFIC AMERICAN SUPPLEMENTS 1547 and 1548 give a resumé in which the various systems of reinforced concrete construction are discussed and illustrated.

SCIENTIFIC AMERICAN SUPPLEMENTS 1564 and 1565 contain an article by Lewis A. Hicks, in which the merits and defects of reinforced concrete are analyzed.

SCIENTIFIC AMERICAN SUPPLEMENT 1551 contains the principles of reinforced concrete with some practical illustrations by Walter Loring Webb.

SCIENTIFIC AMERICAN SUPPLEMENT 1573 contains an article by Louis H. Gibson on the principles of success in concrete block manufacture, illustrated.

SCIENTIFIC AMERICAN SUPPLEMENT 1574 discusses steel for reinforced concrete.

SCIENTIFIC AMERICAN SUPPLEMENTS 1575, 1576, and 1577 contain a paper by Philip L. Wormley, Jr., on cement mortar and concrete, their preparation and use for farm purposes. The paper exhaustively discusses the making of mortar and concrete, depositing of concrete, facing concrete, wood forms, concrete sidewalks, details of construction of reinforced concrete posts, etc.

SCIENTIFIC AMERICAN SUPPLEMENT 1372 contains an article by A. D. Elbers on tests and constitution of Portland cement.

SCIENTIFIC AMERICAN SUPPLEMENT 1396 discusses the testing of cement.

SCIENTIFIC AMERICAN SUPPLEMENT 1325 contains an article by Professor William K. Hatt giving an historical sketch of slag cement.

SCIENTIFIC AMERICAN SUPPLEMENTS 955 and 1042 give good accounts of cement testing and composition, by the well-known authority, Spencer B. Newberry.

SCIENTIFIC AMERICAN SUPPLEMENTS 1510 and 1511 present a discussion by Clifford Richardson on the constitution of Portland cement from a physico-chemical standpoint.

SCIENTIFIC AMERICAN SUPPLEMENT 1519 contains an essay by R. C. Carpenter on experiments with materials which retard the activity of Portland cement.

SCIENTIFIC AMERICAN SUPPLEMENTS 1465 and 1466 publishes an exhaustive illustrated account of the Edison Portland cement works, describing the machinery used.

SCIENTIFIC AMERICAN SUPPLEMENT 1491 gives some fallacies of tests ordinarily applied to Portland cement.

SCIENTIFIC AMERICAN SUPPLEMENT 1561 presents an excellent review by Brysson Cunningham of mortars and cements.

SCIENTIFIC AMERICAN SUPPLEMENT 1533 contains a resumé of the cement industry and gives some valuable formulae.

SCIENTIFIC AMERICAN SUPPLEMENT 1575 discusses the manufacture of hydraulic cement. L. L. Stone is the author.

SCIENTIFIC AMERICAN SUPPLEMENTS 1587 and 1588 contain an able paper by Edwin C. Eckel on cement material and industry of the United States.

SCIENTIFIC AMERICAN SUPPLEMENT 1586 contains a review of concrete mixing machinery by William L. Larkin.

SCIENTIFIC AMERICAN SUPPLEMENT 1583 gives valuable suggestions on the selection of Portland cement for concrete blocks.

SCIENTIFIC AMERICAN SUPPLEMENT 1581 splendidly discusses concrete aggregates. A helpful paper.

SCIENTIFIC AMERICAN SUPPLEMENT 1595 presents a thorough discussion of sand for mortar and concrete, by Sanford E. Thomson.

lowing spring. Before the plants have quite grown together the space between them may be utilized for planting other flowers. The tritoma is very effective with the snowy panicles of the hydrangeas; so, too, is the geranium or the scarlet salvias.

Another beautiful fall-blooming shrub is the althea, and although this in time attains the proportions of a small tree, it may, by pruning, be kept to the dimensions of a shrub, and when grown as a hedge and covered with its wealth of double flowers is indeed a thing of beauty. The double white Jeanne d'Arc, the delicate blush Grandiflora superba, the Alba plena—white with crimson center, Rubra plena—a double rose, are all satisfactory for massing together, while the purple varieties do best together or mixed with white alone. The culture of altheas is simple, and they bloom freely when very young. They should, however, be given some protection during winter, and while young will be the better for wrapping with straw or protecting with evergreen boughs during severe weather.

The fall blooming shrubs are more satisfactory for conspicuous positions than those which bloom in the spring, lovely as many of those are. But the rhododendrons are ornamental in their foliage, and when in bloom are so truly wonderful and gorgeous that they should be planted wherever there is a prospect of their doing well—and one's means permit—for the rhododendron is by no means a cheap shrub, and who would possess a notable hedge of them must reach deep into his pocketbook, unless he is so fortunate as to live in those favored localities where they may be had for the digging.

Unlike the generality of shrubs, the rhododendrons stand moving with much equanimity, the roots forming a close ball of roots, which seem little affected by being disturbed. The plants require a deep, well drained position, where they can be liberally supplied with water, and when forming their buds for the next season's growth they should be given liquid manure twice a week. Unlike the hydrangea, they do not require pruning, but may be allowed to make what growth they will. They require protection in winter, either of a frame and leaves or of evergreen boughs.

In July and August the edges of marshes and wild spots are sweet with the odor of the sweet pepper bush—*Clethra alnifolia*—whose long spikes of white flowers are conspicuous above the glossy foliage. This is one of the best of our native shrubs and well worth cultivating for ornamental hedges. The bloom much resembles certain spireas, and the odor is much more agreeable.

The crimson spirea—Anthony Waterer—is magnificent for hedges, growing as it does in a compact bush about three or four feet high and blooming in dense panicles on the new wood so that it lends itself readily to shearing in any desired shape. It blooms in June, but by removing the flower panicles as they fade it may be kept in bloom the entire summer, and its crimson flowers are very attractive. I know of nothing better for an ornamental hedge.

The weigelas are charming spring blooming shrubs for hedges, as they may be pruned to any desired shape and will cover themselves with lovely bloom for weeks at a time in early spring, and certain varieties are ornamental through the summer, as the Eva Rathke, which blooms continuously, and the Rosa Nana Variegata, whose foliage is beautifully variegated with green, yellow and pink, and bears quantities of delicate pink flowers. One must not overlook the Rosa rugosa, with its beautiful foliage and striking single flowers of white and of red. They make the most beautiful of hedges, and the flowers are followed by bright

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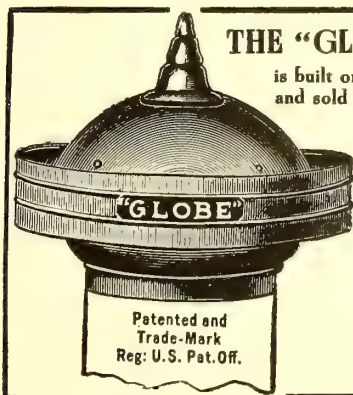
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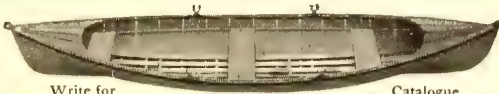
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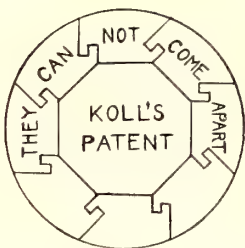
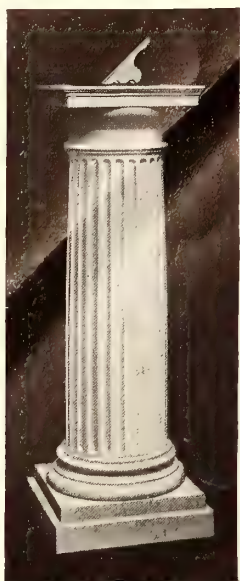
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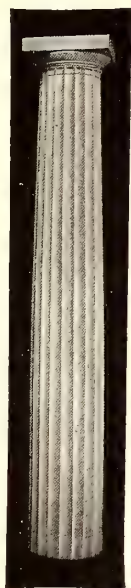
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scarlet hips, which remain on the greater part of the winter and are highly ornamental.

The berberis, also, is beautiful in leafage and in fruit; the variety thunbergii is neat in growth, requiring little pruning to keep it in shape, and its dwarf nature makes it very desirable for hedges, especially along the roadway or the rear portions of the lawn or garden.

Then there are certain of the hardy perennials which make admirable summer hedges when properly trained and supported, as witness the paeonies, which in well established clumps supported by stout wire guards make a compact and lovely hedge when loaded with their wealth of magnificent flowers. Clematis Davidiana is also a desirable plant for the purpose when well developed, and gives large quantities of fine violet flowers throughout the summer.

Physostegia alba and rosea are fine when in bloom, being sturdy erect growing plants, holding aloft their sprays of white and pink flowers which much resemble a gigantic heather. They are hardy perennials of the easiest culture, and once established need little care beyond an occasional watering and annual mulching with manure in the fall. The sweetpea shrub is beautiful with showers of pink and white flowers, and the various spireas are always to be depended upon in the matter of bloom.



HOME ECONOMICS. By Maria Parloa. New and enlarged edition. New York: The Century Co. Pp. 12+416. Price, \$1.50.

Miss Parloa's book on Home Economics has long been favorably known, and the present enlarged edition must find many new readers who will appreciate its usefulness and availability. The book aims to tell the woman the chief facts she should know about the situation and structure of her home, how it should be furnished, what the daily routine of household work consists of, together with some detailed information on the more important parts of household labor, such as laundry work, care of lighting apparatus, fuels and fires, table service, marketing, carving meats, hints on woodwork and polished floors, treatment of wood finishes, the use of oils and stains, a brief chapter on foods, and a lengthy miscellaneous chapter offering all sorts of household suggestions, each one of which is calculated to meet some particular want, and not one of which is without practical value.

The whole subject of home economics is so large that it is difficult to include a comprehensive survey of its multitudinous topics within the scope of a single modest volume. Miss Parloa would probably not offer her book as a complete handbook, but it includes a multitude of important facts, admirably condensed and arranged, and is a book of immense suggestivity and help to every housekeeper.

FARM MANAGEMENT. By F. W. Card. New York: Doubleday, Page & Co., 1907. Pp. 14+270. Price, \$2.00 net.

The farmer is not likely to suffer from lack of literature telling him how to manage his farm, what to plant in it, and how he may win a sustenance and perhaps a fortune from it. The latter proposition is hardly the purpose of Professor Card's book, but he does essay to show the farmer how his farm may be conducted as a business proposition, and how, to quote the publishers, drudgery and "experience" may be changed into "money-making content."

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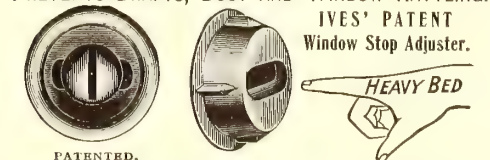
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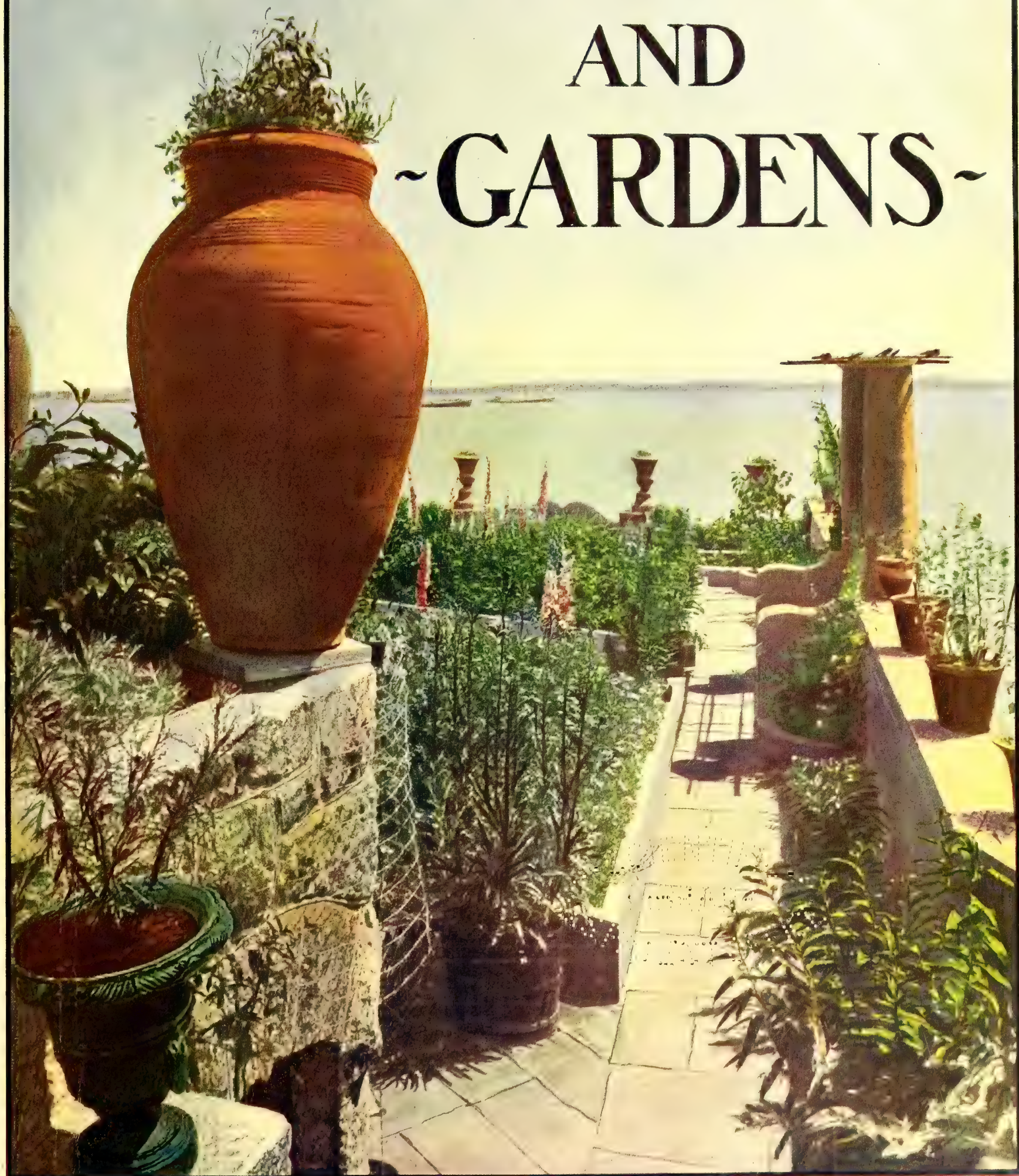


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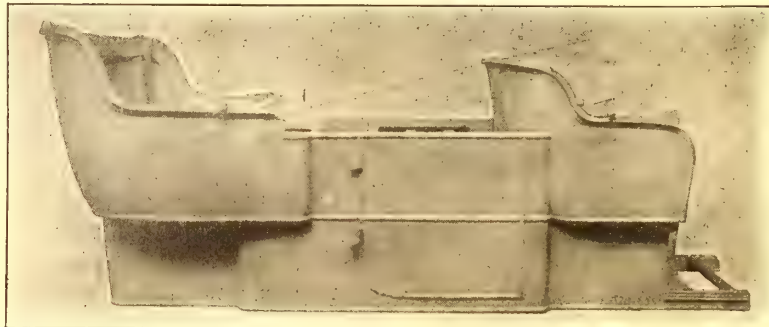
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Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

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Mrs. Guy Norman's Sicilian Garden: The Seat and Canopy in the Garden Wall

AMERICAN HOMES AND GARDENS



Volume IV

September, 1907

Number 9



Mrs. Guy Norman's Sicilian Garden: The Stone Gateway by the Water

Monthly Comment



F SPEED is the chief end of travel, then everything must be sacrificed to that end. Modern tendencies are decidedly in this direction, the most marked developments in the railroad train and the automobile aiming overwhelmingly at the attainment of greater speed. Yet if this be really the object of travel, the joys of those who go about on the surface of the earth are limited to this one thing only. Obviously, therefore, the modern traveler is bound to lose the larger part of the delights of travel. Of the country through which he is drawn or propelled at the highest possible rate of speed, he sees little; of knowledge of it he obtains none at all; of its wealth of natural beauty he absorbs only the sketchiest reminiscences; of its people he scarce memorizes so much as their costume; its intellectual treasures in the way of art he perhaps misses altogether. For him there is nothing but speed, speed, and speed. If the roads are good, and he is traveling by motor car, he has a fine time; if they are bad, he wishes he was in some other place where they are good.

THERE is joy in speeding over a good road. It is marvelously fine to skim for miles at a rapid pace along a smooth and safe highway, free from interruptions and without the annoying supervision of the police. It is not only fine, but it is fascinating, with a fascination that grips and enthralls one. There is small wonder that every other idea is thrust out of mind in the delights of this splendid sport. But let us put it in the right place. Let us admit, as we should, that speeding and traveling are two different things, and the equilibrium of travel will be restored. Granted this distinction, the next step is manifest: speeding should be limited to speedways, and the ordinary roads restored to their ordinary uses for which they are intended. Is it conceivable that every one will then be happy? Not quite, perhaps; for so long as there are excellent roads along which automobiles are forbidden to travel at record-making speed, just so long will the automobilist long for such unconquered highways. At present there is no sufficient means of limiting this great new traffic. It seems to be assumed that because a man possesses an apparatus that will travel over any good road, therefore every good road must be placed at his service. Yet, after all, the criticism against reckless automobiling is not directed against automobiles as such, but against the careless and indifferent folk who ride heedlessly whithersoever they listeth, carrying, often enough, death and destruction into an expedition that is intended to be one of pure pleasure.

THE quiet traveler has many advantages compared with the speed maniac. He travels slowly and leisurely, seeing strange sights and strange people, appreciating wonderful new scenery and, it may be supposed, attentively studying every object of curiosity and interest that presents itself to his mind. If he is traveling for pleasure he seeks all the transcendent pleasures of travel in a strange land. He may not write a book about what he sees, and perhaps it is as well he does not; but he stores up in his memory a vast fund of new knowledge which, throughout his life, will be a constant pleasure and relaxation. The old-time travelers, who went abroad afoot, or journeyed through Europe horseback or by stage coach, reaped many joys that the more convenient and much more rapid methods of modern travel fail to return. If the object of travel is to cover as much ground in

a single day as possible, there is nothing more to be said; but if it is to see and enjoy a strange country to the fullest, then some obvious changes are needed in modern methods.

THE roads of Europe are so almost universally good that excellence in roadways is thoroughly characteristic of that part of the world. It is a significant commentary on American progress that bad roads are distinctively characteristic of this country. It is true, real progress is not wholly unknown among us. The value of good roads is now everywhere recognized, and much has been done in the way of bettering and improving existing roads in many parts of America, while a much greater care is exercised in laying out new ones than was formerly the case. But the real significance of the difference between the good roads of Europe and the bad roads of America is not their relative excellence and badness, but the fact that the European roads were, from the beginning, built in a thoroughly good way, and for years have been the object of the most careful governmental care and maintenance; while the good roads in America have chiefly been promoted by the riders of bicycles and the drivers of automobiles! In other words, the good roads of Europe represent the natural feeling of the government and people toward roads, irrespective of the uses to which they are put or the sort of machines that may travel over them. It is equally true that the bad roads of America represent the national indifference to such matters. Europe has had good roads for many years; in America they have existed for less than the period of a single generation.

THE city man who moves out into the country is immediately impressed with the "greenness" and density of the rural population. To him, it is at once the most amusing and the most astonishing thing. He takes with him, it may be presumed, all the qualifications of the advanced civilization that chiefly thrives in a crowded metropolis, and then finds there is nothing comparable to it in his new surroundings. But does the city man ever realize that while his rural neighbors are as green as grass to him, he is even more obtusely green to them? Harrowing as the thought is, it is unquestionably true. The city boy who has never seen the green fields finds the most ordinary of country sights and sounds as strange as though they belonged to another world. And the older man is equally dense. The doings of the city folk, indeed, are quite as amusing and as full of absurdities to the country folk, as the thoughts and ways of the latter are to the former. Now that it has become the fashion for cooks and chambermaids to write of the doings of their masters and mistresses from their own lowly standpoint, the day may not be far distant when some very green countryman will turn the tables on the city man and depict his greenness in the dense colors they deserve. It will be rich reading when it comes.

THE countryside has its own standards, of which the city folk know little enough and care less. The most ignorant of city folk would never hitch a horse in backward, so its head would be over the dashboard of the wagon and its tail appear in the place the head is usually looked for; but he might not, at the beginning, know how to adjust the various straps or understand their significance. The countryman, however, would look upon a lack of knowledge of hitching and driving as proof positive of the most dense and intense ignorance on ordinary matters of life that had come within his knowledge. The only difference is in the point of view.

Notable American Gardens

By Barr Ferree

Mrs. Guy Norman's Sicilian Garden at Beverly Cove, Massachusetts



SEA-GARDEN is to me one of the most striking and interesting of gardens. Perhaps it is because the coast I was earliest familiar with was a sandy waste, in which only the poorest sort of shrubs grew, and the scarce, stumpy trees were hardly worthy to be dignified with such a name; perhaps it is because I have only seen such gardens of late, and hence they come to me with every quality of novelty. But whatever the reason, a sea-garden has irresistible charm to me, the charm of novelty, the charm of beauty, the charm of vast outlooks, the charm that comes from gently moving water in closest proximity to flower-decked land.

It is a far cry from Sicily to the North Shore of Massachusetts Bay. It is true that almost everything native to Europe and Asia has, at one time or another, and in more or less evident shape, been transplanted to America. Our

architects, certainly, have not been behind hand, or unduly modest, in appropriating to themselves any good thing they could find already done by others. But surely a Sicilian garden on the North Shore promised too great a contrast to have true reality. Needless to say I approached Mrs. Norman's garden with the liveliest curiosity.

From the land it is a garden of the utmost privacy; one scarce sees a jar-top above the inclosure that screens the property from the bounding roadway. You come into it from the house, and the whole of its beautiful loveliness is spread out before you, seen in a glance, and then one begins to take in the wonderful detail of its design and planting.

The garden is not large, and fortunately a garden need not be large to be beautiful. But it is a garden that, I am very sure, has heavily taxed the ingenuity of the designer, Mr. Brown, of the well known firm of Boston architects, Little & Brown. Not that any bit of it is forced, but it



Terrace Below Terrace Descend to the Outer Supporting Wall



Italian Jars on the Stone Terrace-wall

surely required rare skill to put so much of interest into so small a space and arrange each separate part as a distinct contribution to the effect of the whole.

It is not until you have walked down the narrow path to the bounding sea-wall, and peeped over its upcurved top, that you discover that it is practically all made ground, held within a stoutly built retaining wall, of which the one you are leaning upon is the crown. And why not? Surely all this lovely flower growth must have earth in which its roots may feed, and the sharp decline of the natural coast line offers little enough in the way of a garden site. So this jut of rock—for it is little else—was walled around on its exposed sides; the space thus formed was filled in with earth; and then, on the level ground thus gained, the garden was laid out.

It was walled with cemented borders; paths were laid down according to a set diagram; terraces were contrived of stone and cement; two great columns, with a pergola trellis were stood up in the center of one wall; the furthest wall was treated with upward curves, with cemented vases directly on the sea; a stone arch served as the exit or the ingress, according to your own direction, at the end of another path; and then the center was filled with flower beds—all cement bordered—and the whole was ready for the planting.

I suppose it would not be quite right to say that every blooming plant was taught to bloom here, but I can not be far wrong in such an assertion. The garden fairly blazes with green and color, great masses of bloom overhanging the paths and run-



Flowers and Paths by the Sea

ning riot at every point. I was not fortunate enough to see the garden from the water, but surely it must make a note of wonderful color seen from without, a brilliant beacon of light on this grass-grown, tree-bordered coast.

Fortunately I need not enlarge on the beauties of the garden, since the accompanying photographs make that clearer than any words of mine could. At the most I can but speak briefly of it, and roughly describe its situation. It is an open garden without a tree, that is to say, no tree grows in the garden itself. But its borders are not treeless. Just without it, near the house, are some fine old trees, and a giant oak overhangs the boat landing. This foliage gives the garden an abundant frame of green, and leaves the whole of the garden space free for the planting of flowers and the cultivation of brilliant natural colors. The great jars which stand atop the uppermost terrace, just below the house, undoubtedly add largely to the south Italian character of the garden and from whence it derives its descriptive name. Pots and jars and vases of various sorts are stood upon the paths and along the walls, so that no single spot is without its own plant, no opportunity wasted that plants may grow and flowers bloom.

Of all the qualities that go to make a garden, that of novelty is distinctly the least important. A garden is not made because it is something "new," but because it is something beautiful. Mrs. Norman's garden is unquestionably novel, but its novelty lies wholly in its situation and in its architectural framework. As a garden



An Outlook Over the Water



The Path Below the Upper Terrace



Italian Jars on the Stone Terrace-wall

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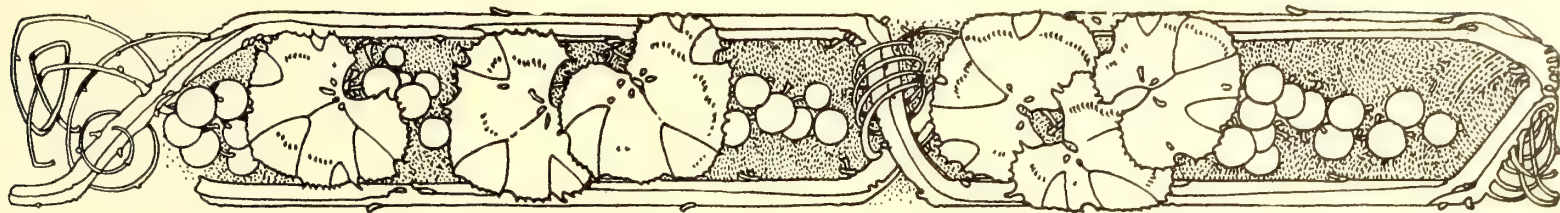


The Giant Oak and the Water Landing

it is beautiful, and hence it fills all the requirements of a garden. It is interesting in design, and hence it is attractive in its general plan and layout. It is novel, of course, because it occupies a novel situation, and the general design is quite distinct and unusual; but these are, in a sense, accidental characteristics, and are thoroughly subordinate to the more important fact that the garden is supremely lovely, a veritable concentration of loveliness, a distinctly notable place among a host of other notable places.

And, then, beyond it all, sweeps the blue waters of Massachusetts Bay, affording a boundless outlook. From above one looks down over the terraces and their beds of brilliant bloom, across the outermost wall, to the deep blue of the water. It is, as it were, a cluster of rare jewels set in a crystal setting of limitless extent. I am very sure the garden would not be half so beautiful had it not this water outlook; and I am very sure also that the water rarely looks so lovely as when viewed from this sea-garden.





Historic Mansions of the James River

I.—“Martin’s Brandon,” the Home of the Harrisons

By Francis Durando Nichols



IF ROMANCE and history it may be said that they are themes of inexhaustible interest, as potent in their charm to-day as in the older periods when mankind had less numerous varied things to demand his attention. Separately and alone each has fascination to command the heart and mind of the most indifferent; united and combined they yield nothing to any form of human memory or endeavor. There are many places in this broad land of ours that are richly dowered with romance and completely saturated with the memories of the historic incidents of which they have been the scene, but perhaps nowhere do they grasp the emotional heart so thoroughly as on the shaded waters of the James River. Here history is breathed in with the very air; it peeps at one from behind the trees, one steps upon historic earth at almost every footstep, and stately buildings rise above the river bank, recalling romantic episodes and testifying to this day the very rare and unusual circumstance—for America—of centuries of ownership and occupancy in single families. One does not need to seek for history or for romance here, for they stare one in the face at every turn in the gracious form of splendid trees and fine old mansions. The procession of the years has brought many changes to these quiet river sides, but the grand old mansions still re-

main intact in their rare old splendor, and one has but to enter their hospitable doors—as hospitably open to-day as in the days of their greater activity—to step instantly into an historic past of a true romantic memory.

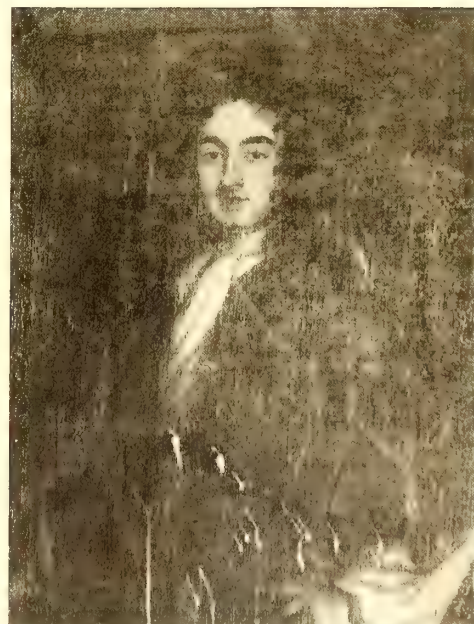
The beginnings of Brandon as an estate go back almost to the commencement of Virginia history. Among the company that sailed in the expedition sent out by the London Company in 1606, under the command of Captain Christopher Newport, was one James Martin. He was the son of Sir Richard Martin, and was born about 1560-1565. He had commanded the “Benjamin” in Drake’s voyage of 1585-1586, but from 1606 became identified with the history of Virginia. In 1616 he received from the Virginia Company a grant of “ten shares of land in Virginia,” which in the following year he located at Martin’s Brandon on the James. The patent covering this grant was very broad; “he was to enjoye his landes in as lardge and ample manner, to all intentes and purposes, as any Lord of any Manours in England dothe holde his groundes”; and it was the cause of the first contest in America on charter rights between “The First House of Burgesses” and “their loving friend, Captain John Martin, Esquire, Master of the Ordnance,” a contest that took Martin back to England more than once and which provoked much contention in the colony for many years. The original deed to Captain Martin is still in the possession of the present owner of the plantation, Mrs. Gulie C. Harri-



Governor Parke



Evelyn Byrd



Colonel William Byrd

son, who has many later deeds, including those to Nathaniel Harrison dated 1698, 1720, 1724 and 1725.

The date of Captain Martin's death is unknown, but at least he was living in 1626-1627; his grave, which is doubtless at Brandon, is unknown and unmarked. The connection between Martin and the Harrisons is not clear. An Ensign Harrison, who was probably Harmon Harrison, came to Virginia in 1608, and was complained of, together with Captain Martin, before the First Assembly in 1619. It is possible there was a relationship between the two men, but it is at least certain that Brandon, with its ten thousand acres, passed into the Harrison family, and became completely identified with it, for at a very early time it became their ancestral home.

The earliest buildings on the plantation were long since swept away to make room for the present stately mansion, commenced, doubtless, by Colonel Nathaniel Harrison about the middle of the eighteenth century; it was completed by his son, of the same name. It is thoroughly typical of the old Colonial architecture of Virginia, being built of brick, with two wings. The latter are earlier than the center, the brick being laid in Flemish bond, the northern wing having black headers. The house is built on a high bluff and is about six hundred feet back from the river. A landing at the water's edge abuts against a path by which the main entrance is reached. A great central hall, completely wainscoted, fills the center of the house. Its depth is broken by a triple arch, supported on Ionic columns, beneath one of which rises the stairway that leads to the billiard-room, which is directly over the hall.



A Corner of the Garden Showing Some of the Fine Old Yew Trees



The Overgrown Box Hedge in Front of the Garden Side of the Mansion
Still Flourishes in Splendid Growth



The Block House Used
Brandon when



The Garden Walk from the House to the River Was Laid Out by Mrs. Benjamin Harrison

On one side is the drawing-room; on the other the dining-room, while passages opening beyond lead to the other parts of the house. Each is a room of great size, with vast fireplaces, and paneled throughout like the hall. The wainscoting, unfortunately, was greatly injured during the Civil War, when much of it seems to have been torn off by seekers for treasure. To complete the sketch of the plan of the house it is sufficient to state that an anteroom from the drawing-room gives access to four sleeping-rooms, two on the first floor and two on the second; the opposite wing contains the office and room of the manager of the estate and two guest rooms in the second story.

Perhaps no one feature of Brandon is so interesting and important as the great gallery of portraits which is hung on the walls of the drawing-room and the dining-room. There are portraits by Sir Godfrey Kneller, Benjamin West, Vandyke, Sir Peter Lely and other celebrated artists, including a collection made in England in the eighteenth century. The portrait of the celebrated Colonel William Byrd, and the latter's beautiful daughter, Evelyn, are among the most notable of the whole series and among the choicest possessions of the house.

In the drawing-room is a portrait of Sir Charles Wager, which hangs above the mantel, and continuing around the room to the right are portraits of G. E. Harrison, Sir Robert Southwell, Mrs. Evelyn Byrd Harrison, the second wife of Benjamin Harrison, Lady Betty Claypole, Evelyn Byrd, Lord Halifax, Earl Egremont, Earl Orrery, Mrs. Fitzhugh and Benjamin Harrison. In a case in the corner is a fan which



Refuge by the Families of
killed by the Indians

The Old Garden Laid Out Over Two Centuries Ago, with the Box Hedge Still
Tracing the Old Garden Walks

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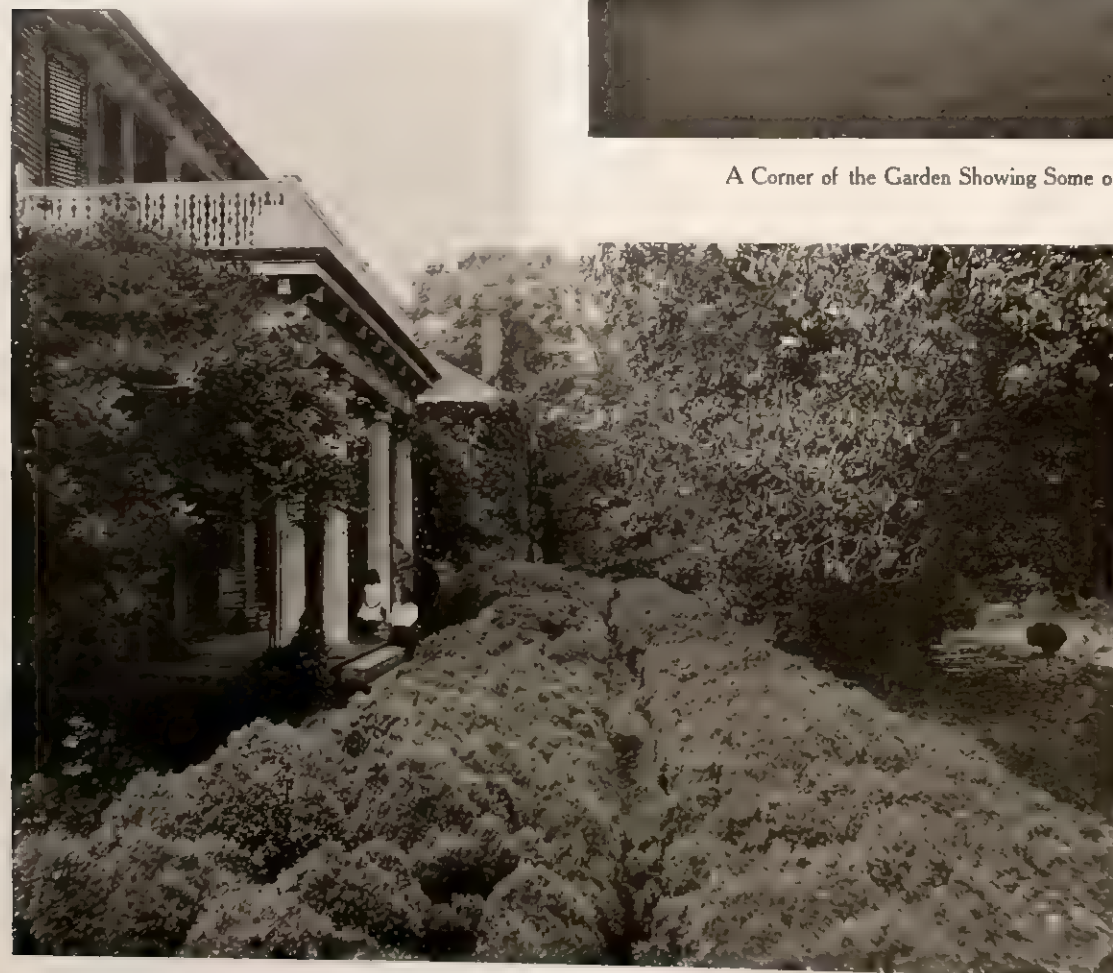
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A Corner of the Garden Showing Some of the Fine Old Yew Trees



The Garden Walk from the House to the River Was Laid Out by Mrs. Benjamin Harrison



The Overgrown Box Hedge in Front of the Garden Side of the Mansion Still Flourishes in Splendid Growth



The Block House Used as a Refuge by the Families of Brandon when Attacked by the Indians



The Old Garden Laid Out Over Two Centuries Ago, with the Box Hedge Still Tracing the Old Garden Walks

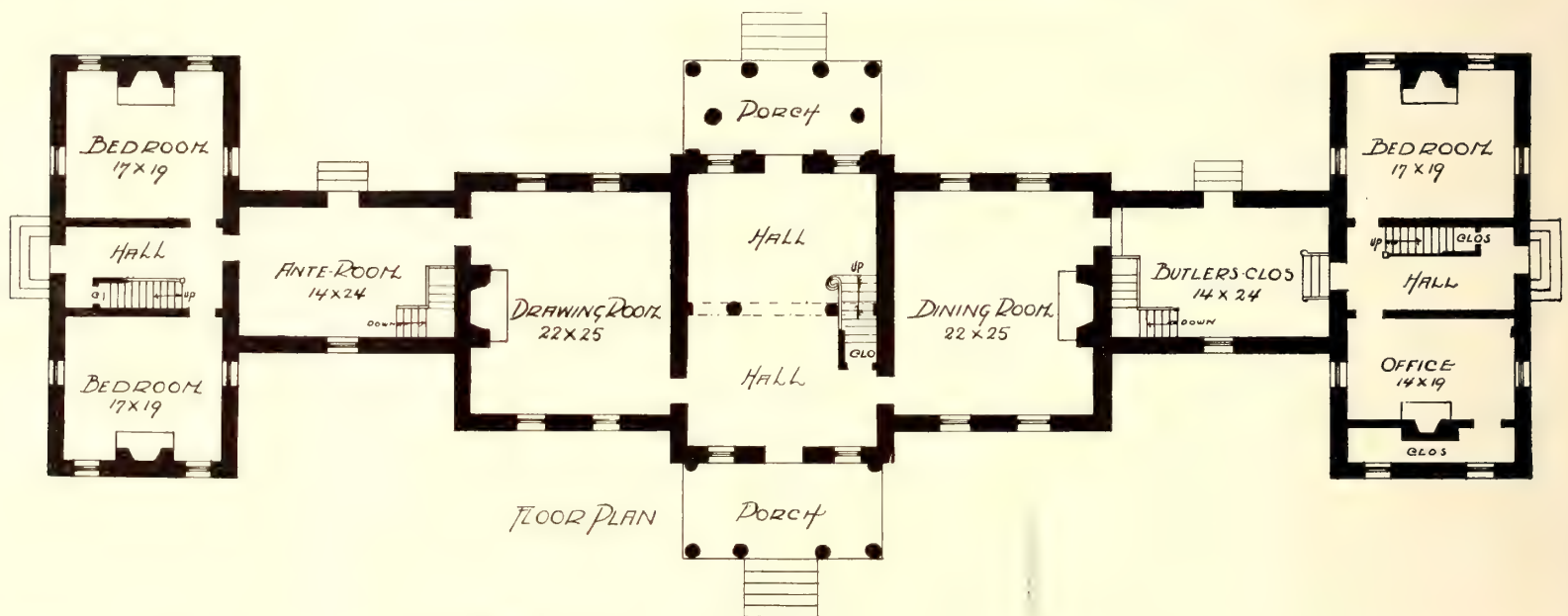
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The House Roofs Show Above the Shrubbery and Trees on the Garden Side



Originally the North and South Wings Were Detached; the Whole Group Has Now Been Connected as One Dwelling



The Entrance from the Roadway, Showing the Central Building and the Two Wings



The Garden Doorway Still Retains the Bullet Marks of the Civil War



The Length of the Great Hall Is Divided by a Triple Archway Supported on Ionic Columns Beneath Which Rise the Stairs to the Billiard Room on the Second Floor



Over the Drawing-room Mantel Is the Portrait of Sir Charles Wager ; to the Left Are Benjamin Harrison and Mrs. Fitzhugh Over the Mirror Is the Earl of Orrery



The Portrait above the Dining-room Mantel Is that of Governor Alston by Benjamin West; to the Right Are the Duke of Argyll and Benjamin Franklin



On the South Wall of the Drawing-room, Beginning on the Right of the Window, Are, in Order, Portraits of Mrs. Benjamin Harrison, Lady Betty Claypole, Governor Parke, Evelyn Byrd and Lord Halifax

was carried by Evelyn Byrd when she was presented at court in England.

Over the mantel in the dining-room is a portrait of Governor Alston, by Benjamin West, and around the room, beginning on the right, are portraits of the Duke of Argyll (Jeanie Deans' friend), Benjamin Franklin, Mrs. Taylor, Colonel Byrd's wife's sister, Sir Robert Walpole, the Duke of Albemarle, Colonel William Byrd, Mr. Randall and Mr. Waltho. All told, a goodly company of notable men and women, painted, for the most part, by painters of distinguished eminence.

At some distance to the west of the house are brick buildings intended for the storage of provisions. Beyond them is the family burying ground. The tombs, however, are mostly modern, except those of Benjamin Harrison and his wives, which were brought here from Old Brandon Church. On the way thither one passes the old block house, in which the families of the plantation found refuge when an attack by Indians was impending. It is built of red brick, laid in Flemish bond. The provisions were stored in the cellar and the families occupied the upper part of the structure. The small black spots shown in the photograph are the gun holes through which the attacking force could be shot. The cessation of the Indian wars, however, did not lessen the military dangers which beset Brandon. It was the seat of considerable military activity in the Revolution, and the bullet holes made during the Civil War still deface the moldings of the outer doorways and the adjoining walls. Much internal injury was inflicted at the time, but the family portraits and household effects were transported to Richmond, and hence many priceless relics were safely preserved.

The first Benjamin Harrison in



The Communion Service Presented by John Westhrope to the Parish of Martin's Brandon. Date about 1659

Virginia, while the owner of large estates, does not appear to have been connected either with Brandon or Berkeley, the famous seats of this family on the James River. His son, Benjamin Harrison the Second, was born in Surry County, Virginia, in 1645. Colonel Nathaniel Harrison, the son of the second Benjamin, became the owner of Brandon, and was the first of the family to be definitely associated with the estate. He was born in 1677 and died in 1727. It was his son, likewise, named Nathaniel, who built the present mansion, or at least its oldest parts. He was born in 1738. He was succeeded in the ownership of Brandon by his third son, Benjamin Harrison, whose portrait still hangs on the walls of the drawing-room of the mansion, together with the portraits of his two wives, the first of whom was Anne, daughter of William Randolph, of Wilton, and the second, Evelyn Taylor, the daughter of Colonel William Byrd, of West-

over. All these gentlemen filled important public offices in their day, in addition to conducting the large affairs of their estates. The latter could at no time have been unimportant, for the acreage of the plantation of Brandon was at all times immense, requiring not only constant oversight, but many men and women for its successful cultivation.

To know the old Virginian intimately, one must go to his ancient home, be greeted by his hospitable descendants, eat and drink from his old plate, cultivate an acquaintance with his family portraits and wander among the ruins of his garden. Afterward you must take a walk across the park to his family graveyard, and decipher the arms and inscriptions of the many tombs inclosed therein. Even then, unless you have Southern blood in your veins, you may not be able to appreciate the Virginian cavalier.



The Quaint Staircase in the North Wing

Wonders of the Gourd Vine

By E. E. Willcox



HE gourd vine is easily one of the most remarkable of horticultural growths. It will produce genuine freaks of nature, and will retain their forms for generations if properly cared for. The product of the gourd vines is not only astonishingly interesting and varied in itself, but it is capable of being applied to all sorts of useful and decorative purposes, which add immensely to the interest of their culture. As the fruits vary greatly in size and shape, even on the same vine, their decorative uses can be equally individual and distinctive.

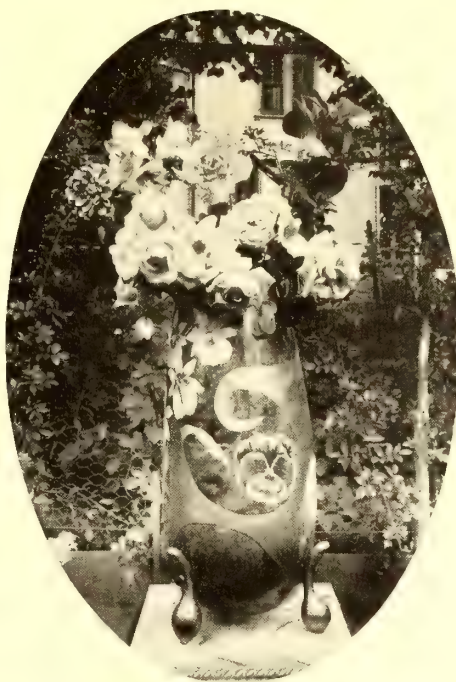
Gourds should be planted in the same manner as pumpkins, watermelons, squashes and cucumbers, but never near them; for being of the same family they readily hybridize when grown in the same vicinity, and the fruit, under such circumstances, will speedily decay. In northern climates it is well to start the seed within doors about the latter part of March. The seed should be planted in three-inch squares of upturned sod, the root end of the seed being placed down and covered to its length with soil. It should be transplanted when the warm weather is certain, and given plenty of sun exposure, training and tying the vine to an ample and strong support. They are lusty climbers, growing a foot or more in twenty-four hours.

The large varieties should be tied to their support near the stem, while the large bottles and sugar-troughs must be supported underneath, as otherwise they will tear away from the vine during storms. Hercules clubs, dippers and all the long-necked varieties must hang clear of everything lest they chafe, which causes decay or an imperfect

gourd. The fruit should never be distorted during its period of growth with the idea of obtaining a strange shape. Such products are unnatural and of no real interest. It is much more fascinating to hybridize, a work done partly by the plant grower and partly by the bees. To accomplish this work successfully freely flowering plants should be grown near the vine to be hybridized. The gourds should be grown in groups to secure good results: the long-handled dipper with the novelty gourd; the short-handled dipper with the long-necked bottle; the Hercules club with the long serpent.

Never plant a Hercules club with a sugar-trough, for they are too widely separated, even if they be somewhat near, and will either be late in fruiting or blast when partly formed. When the plants show signs of flowering, a miniature gourd before the buds burst is an indication of a female blossom. This will continue to develop if the bees, in their search for honey, have attacked sufficient male blossoms to gather sufficient pollen on their legs to bring about the fertilization of the female flower. If the flower develops the result is sure to be as strange and odd as can be desired.

When the fruit turns a light or yellowish color it has developed sufficiently to be saved. When frosts kill the vine, or moldy spots appear, the fruit may be cut off. The cuticle-like covering may then be scraped away with the edge of a spoon, and the gourd thoroughly washed with a rough cloth. It should then be placed in the sun to dry, or subjected to artificial heat, the drying process, by either method, being one of the utmost importance. The gourds are now ready for decorative treatment. Only the best and most perfect



A Large Bottle Vase with Spoon-Gourd Legs



The Large Bottle Gourd Readily Lends Itself to Decoration



A Column of Hybrids, Golf Sticks, Drum-Major, and Long-Handled Dipper



The Large Bottle Gourd Must be Supported from Above



The Gourd Garden Fully Grown Is Thickly Screened with Handsome Foliage

specimens should be used. Take a bottle gourd and cut off its stem, and you have a flower vase; make a cut further down, and you have a jardiniere, which may be decorated in oil colors as your fancy pleases; make another cut and you have a bowl. This may be decorated in pyrography and used for crackers, fruits or other purposes. Even a plain Hercules club, decorated with pyrography, may be effectively used as a den ornament. They can be transformed into musical instruments, forming horns with quite a real tone, and they can be used as ball clubs for light work.

Sugar-troughs can be put to many useful as well as ornamental purposes, such as jardinières, seed-dishes and punch bowls, by cutting away a portion of the top and decorating with oil colors or pyrography. Or they can be turned into drums by cutting away a quarter of the top and stretching a parchment over the aperture. Among many African tribes these drums have a practical utility. The green skin of a young goat is stretched over the aperture, drawn very tightly and allowed to dry thoroughly. Such drums yield a very penetrating sound when beaten, and are used as a wireless system of communication between separated tribes, each village having its trained drummers who will send these signals from hill to hill for several hundreds of miles.

The dipper gourd is the easiest variety to use, and permits of the most useful applications. They make beautiful long-stemmed flower

vases. Clip off the top and use as a fancy perfume bottle, with a miniature bottle as a stopper. Cutting out a third of the side and neatly sandpapering the edges makes a good dipper and an attractive article for decoration. Cut the bulb part in the middle, rounding the edges with sandpaper, and use the upper part as a calling horn or megaphone, and one will be surprised with the sounds that can be made and the audibleness of words at a considerable distance. The bowl part, when decorated say with bronze designs, pyrography or oil colors, makes an attractive nut-bowl. No change is needed to transform this into a child's eating dish, save a spoon, and this can be formed from a spoon gourd, cut as a perfect spoon.

A vase can be made by taking a long bottle gourd and supporting its bulb part

by spoon gourds as legs. Miniature bottles can be transformed to salts or peppers by puncturing the stem and making a small aperture on the bottom, which should be closed with a cork. A whole tea set, in fact, can be made from the various varieties that any one can grow easily.

If the gourds have turned black or rusty, paint them and cover up their imperfections, for the beauty of their forms will still be preserved. If one is not handy with the brush, they may be decorated with cut-out pictures or with photographs pasted on. In short, by the application of a little taste and ingenuity a host of beautiful and useful objects can be made from this fruit of the garden, a fruit interesting



The Gourd Garden in Early Spring Is a Barren Waste of Stones and Base Supports



The Golf-Stick Gourd Has a Practical Utility



The Dipper Gourd as Flower Vase



The Drum-Major Gourd

to grow, beautiful to see, and fascinating in the opportunities it yields to home-made decoration.

Of the peculiar shapes in my collection the most singular is the hybrid resembling a golf stick. It is as perfect as though made mechanically. The fruit grew with a handle as straight as an arrow, with the bulb part curved, the whole measuring four feet in length. It is a novelty quite unknown to the Department of Agriculture at Washington. The drum-major's stick comes next in novelty. Of smaller varieties, one of the most striking is the egg gourd, which so



A Late Season Growth of Gourds

closely resembles an egg that an unexpected fall to the ground invariably draws a scream from the unsuspecting. The small varieties, however, do not, as a rule, dry well.

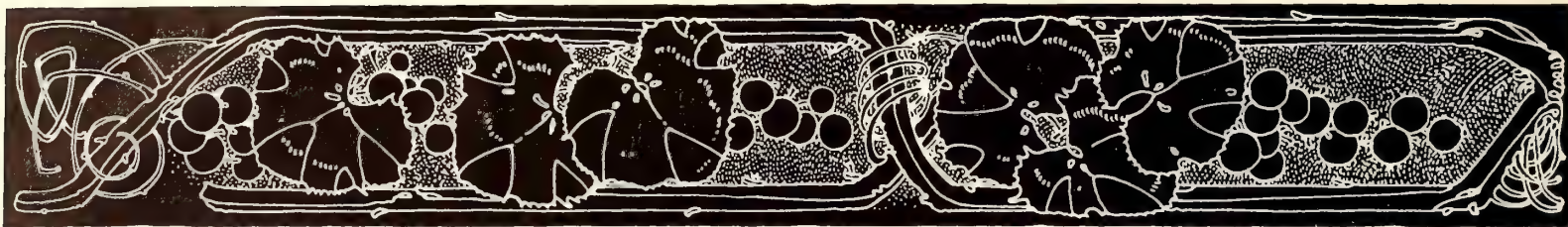
There is no labor involved in raising gourds that can not be performed with the utmost ease. And the interest they yield is immense. Seeds grown from one hybridization one year, may be hybridized again the next, with stranger still results. The foliage is always beautiful, and the vines, quite apart from their fruit, are of real decorative value. I cordially commend this vine.



The Strangest of All Gourds Is the Golf Stick



Decorating the Gourds Affords Endless Occupation



Curtains and Draperies

By Delia Austrian



WHEN glass and brocades cover the windows they deprive a room of sunlight; but if the room is without curtains the sunshine is often so strong as to fade the carpet and furniture. To curtain wisely is between these extremes; the tendency to-day is to have the curtain simple. In early days curtains were often elaborate, and the draping of them no easy matter.

Early inventions of household furnishings were scarce, but curtains were among the earliest kind of decorations. The Renaissance and the expedition of Charles VIII into Italy made them more general. The looms of Holland, England, and France were kept busy weaving materials for furniture coverings and draperies. Tapestries decorated the walls and the window curtains were kept in harmony.

During the reign of Louis XII, the materials most commonly used were tapestry, brocades, and velvets. These heavy hangings were often trimmed with braid, lace, and fringes. The reign of Louis XIV gave more elaborate decorations to France. The furniture was exceedingly elaborate, and the cornices for the curtains were made to harmonize. The windows were long and consisted of square panes in a long sash. Outside the window there was usually only one railing. The window was usually decorated with one cornice; this was sometimes simple, but more often it was carved elaborately. These cornices were either enameled white or

gilded to match the panels and doors, and were ably designed. The window-curtains were just as important as the drapings. Those curtains next to the panels were white, made of laces, embroideries, and India muslin. Over these were hung handsome draperies of velvet and silk, often embroidered exquisitely and folded with care. In one beautiful suite of the eighteenth century, the room was furnished in jonquil-colored Lyons brocade embroidered with silver flowers. The portières were of jonquil taffeta trimmed at the top with silver lace or braid, while the bottom was ornamented with silver fringe. The portieres were of brocade similarly trimmed.

The Persian pattern was also exceedingly popular at this time; a sort of figured chintz of white background decorated with flowers and birds. The curtains of Madame de Pompadour were always elaborate and of Oriental pattern, painted with little figures of Chinese images. In the reign of Louis XVI, green and yellow taffetas were the prevailing style; these curtains were usually wadded and heavily lined to give a stiff appearance. The favorite design in the time of Marie Antoinette was the winding ribbon alternating with a straight stripe and sprinkled with delicate flowers.

The Directoire banished all elaborate trimmings; the keynote of the time was simplicity. The cornice and heavy drapery were abolished, and their place was given to a thin pole and a light silk curtain. Although the Empire restored the gilded cornice and the silk curtain, neither ever regained



Flowered Cretonne Curtain for a Living-room



Velvet Portiere for the Hall



Swiss Curtain and Raw Silk for the Bedroom

their early splendor, nor did they have as much grace. The arches above the windows are merely artificial, being only wooden frames put up, strained with canvas; after which the same kind of stuff which the curtains are made of is formed to appear like a fan and drapery locked on to it.

As early as 1800 the rolling-up blinds and spring-blinds were used, and also the Venetian blinds drawn by pulleys. Sheraton says: "The most fashionable blinds are all of wood painted green, except the frame, which is of mahogany. The blind part is either composed of upright or horizontal narrow laths, an eighth of an inch thick, painted in bright green, and which moves by means of a lever to any position for admitting more or less light. The most approved of at present are with upright laths, and moved by turning a brass knob at the upper side of the frame."

This elaborate window furnishing is no longer fashionable, because it is thought foolish extravagance to put from two hundred to five hundred dollars in a window decoration. Moreover, in draping a window light must be taken into consideration. The idea that prevails now is to curtain the window with the thinnest material possible. Where a room is light, harmony and variety are the laws that govern the selection. It is always in good taste to give the effect of matching the wall paper. This is done by getting a plain material if the wall paper is plain, and a figured curtain with a figured wall paper. The contrast may be made by combining the plain curtain with the figured wall

paper. Case window curtains hung on a single rod are exceedingly popular these days, and are made of muslin, cut or raw silk. If a double pair are wanted these may be made of cretonne or chintz. French chintzes and cretonnes are always in good taste for bedrooms, and are the best material in summer homes.

Whether long curtains just to escape the floor or to the sill are preferable depends on certain conditions. Considerable money may be saved by using the shorter curtains: besides if a seat or radiator be in the way the shorter curtain is to be used. The best laces for the parlor are the Renaissance and Brussels, white curtains being preferable. Cluny and

Arabian laces are much used in dining-room and library.

For over-curtains there are a great variety of handsome materials—such as velours, silks, silk-alene madras, and cretonnes. Velours and brocades make heavy draperies and should only be used in costly or elaborately furnished rooms. These may be substituted by tapestries and heavy broadcloths.

Heavy curtains are usually out of keeping in bedrooms unless these rooms are furnished handsomely. Muslins and point d'esprit are appropriate for sash curtains, and they may be hung with madras, printed scrims and cider cloths. All these materials are effective when worked in bright colors and attractive patterns.



Swiss Sash Curtains and Japanese Silk Drapery

For summer homes and cottages cretonnes and colored prints are greatly in vogue. The flowered cretonnes are desirable for the bedrooms, but the geometrical and more conventionalized figures are better for the rooms below.

are the materials. The valance should be made very full and the side hangings finished with ruffles. Another effective hanging is a plain material with a border used as an outer hanging. Next to the glass is a figured madras.

Curtains should always be hung on rods, so that they may be swung open or closed easily; the pole is preferable for portieres, and it should match the woodwork of the room.

Draperies that are festooned and looped are in exceeding bad taste. They are bad from the standpoint of decoration, and are ruined for all practical purposes. The more simply curtains and portieres are draped the better.

Color is also an important point in the selection of curtains. White curtains are always in good taste in bedrooms, and their beauty is enhanced by flowered cretonnes that harmonize with the paper. White or yellow curtains are desirable for the living-rooms, and the draperies and portieres may either blend or offer a pleasant contrast to the wall paper and carpet. In the

materials used and the colors adopted there is surely a range of choice sufficient to meet the needs of any one with the most fastidious taste.

One pretty summer house has a large living-room that opens on a veranda. It may be shut off by glass doors inlaid with small panes. Before it hangs a handsome China-silk portiere that may be drawn across when the doors are left open. The windows have sash curtains made of the same material, and a handsome embroidered lambrequin is draped above the mantel.

An artistic hall is paneled in light oak. The door between the hall and living-room is draped with velvet curtains the same shade as the woodwork. Panels of velvet are placed about the rooms. A velvet curtain is hung at the casement window, and the seat is cushioned with velvet.

A spacious living-room has its chairs covered with cretonnes. The windows are trimmed with dotted net curtains, while a scarf of cretonne is draped between the living-room and den.

A dainty bedroom is covered with cretonne wall paper. The sash-window has a curtain of dotted Swiss, and the long window has a curtain of plain cretonne that offers a pleasing contrast with the wall paper. Another bedroom is paneled with a rich cretonne, while a portiere of cretonne separates bathroom and living-room. Good taste is the basis of all good curtaining, applied with a keen sense of the end sought.



Raw Silk Portiere for Living-room

Great care should be given to the selection of portieres; velours, brocades, and monks' cloth are appropriate in elaborate homes, but silks and heavy madras are a wiser selection for apartments.

It is to be remembered that the hangings between rooms have a more substantial use than the mere adding a patch of color or softening hard lines. Where there are no doors the portieres take their place, though not as much as the wooden door. It follows, therefore, that these curtains must cut off one room from another and shut off the view and sounds if necessary. Very sheer materials are too flimsy for portieres and are not to be used. Foreign houses are seldom as open as are American homes and are less subject to drafts, but the point to be made for the open rooms is that they appear much larger than they are and are valuable for purposes of entertaining. The variety of materials which may be used are large. The decorations used upon these materials include embroideries, galloons in woven or dyed designs, stencil or painted decorations.

The hanging of the curtain is as important as the material. Where raw silk is used the net and silk may be sewed together and hung on one rod.

If the living-room has casement windows the shade can not take the place of a rod; the rod is necessary.

As a decorative feature the valance may be used effectively, this is especially true when cretonnes and prints



The Wild Garden

A Plea for Our Native Plants

By Eben E. Rexford



ANY persons are under the impression that we have few, if any, native flowering plants and shrubs that are worthy of cultivation. They have been accustomed to look upon them as "weeds," or "wild things," forgetting that all plants are "weeds" and "wild things" somewhere, and so unfamiliar are they with them that they fail to recognize them when they meet with them outside their native haunts. Some years ago I transplanted a golden rod from a fence-corner of the pasture, and gave it a place in the garden. There it grew luxuriantly, and soon became a great plant that sent up scores of stalks each season as high as a man's head, each one crowned with a plume of brilliant yellow flowers that lighted up the corner of the garden where it grew like a bonfire. One day an old neighbor came along and leaned over the fence to chat with me as I worked among my plants.

"That's a beauty," he said, looking at the golden rod. "I don't know's I ever saw anything like it before. I reckon, now, you paid considerable money for that plant."

"How much do you think it cost me?" I asked.

"Oh, I don't know," he replied, looking at the plant admiringly, and then at some of foreign origin near by. The price of these he knew something about, for he had one of them growing in his own garden. He seemed to be making a mental calculation, based on the relative beauty of the plants, and presently he said: "I wouldn't wonder if you paid as much as three dollars for it. How near have I come to it?"

"That plant cost me nothing but the labor of bringing it from the pasture," I answered. "Don't you know what it is? There's any quantity back of your barn, I notice."

"You don't mean to say that's yellow-weed?" exclaimed the old gentleman with a disgusted look on his face. "I wouldn't have it round *my* yard. We've got weeds enough without settin' 'em out." He went away with a look on his face that made me think he felt as if he had been imposed on.

While it is true, in many instances, that "familiarity breeds contempt," it is equally true that familiarity without prejudice would open our eyes to the fact that beauty exists all about us—in the lanes, the fields, and the forests. We are not aware of the prevalence of it until we go in search of it. If we go out with "the seeing eye," we find it everywhere. Nothing is so plentiful, or so cheap, as beauty, to the lover of the beautiful. It may be had for the taking. We have fallen into the habit of looking to foreign lands for plants with which to beautify our grounds, thus neglecting and ignoring the beauty at our own doors. A shrub with a long name and a good big price attached will win our admiration, while a more beautiful native one is wholly overlooked. This ought not to be so. "Home first, the world afterward," is the motto of many patriotic men and women, and it ought to be the motto of the lover of the beautiful in plant-life, when he is seeking for something with which to ornament the home grounds.

Many persons have, however, become interested in our native plants, and it is apparent that the interest of the masses in whatever is beautiful is steadily increasing. It is an indication of education along a line where next to nothing has been done when we see that the taste of the amateur is becoming keen enough to appreciate native beauty to such an extent that a demand has sprung up for shrubs and plants of

American origin. They are beginning to sell, the dealers tell us, and the fact that the florist finds there is money in growing native plants for the market is a most encouraging sign. Appreciation of true beauty is putting a value into things which have heretofore had no idea of value connected with them.

But the dominant idea I have in mind in writing this article is to enlist the boys and girls in the work of making a collection of native plants. I want them to make what we call a "wild garden"; in other words, a garden composed wholly of American plants, gathered from the field and forest.

Such a garden can be of great educational value, and, at the same time, ornamental. It can be made to assist in the development of patriotic as well as esthetic ideas. It can be made to stimulate a healthy rivalry among the children as to who shall have the most complete collection of native plants. In the care and culture of these plants they will gain a skill and knowledge that may be of much benefit to them in the future, and possibly to the world. Who knows?—we may have among us a young Linnaeus, or a Humboldt, and the making of a wild garden may tend to the discovery and the development of a talent which coming years may make us proud to do honor to the possessor of.

I would suggest the formation of a wild garden society in each village or neighborhood. Organize little expeditions into the surrounding country in search of shrubs and plants. Take with you a good-sized basket and something to dig your plants with, when found—and your dinner. Every such excursion can be made a sort of picnic, and I venture the prediction that your first trip to the woods will not be your last one, by any means.

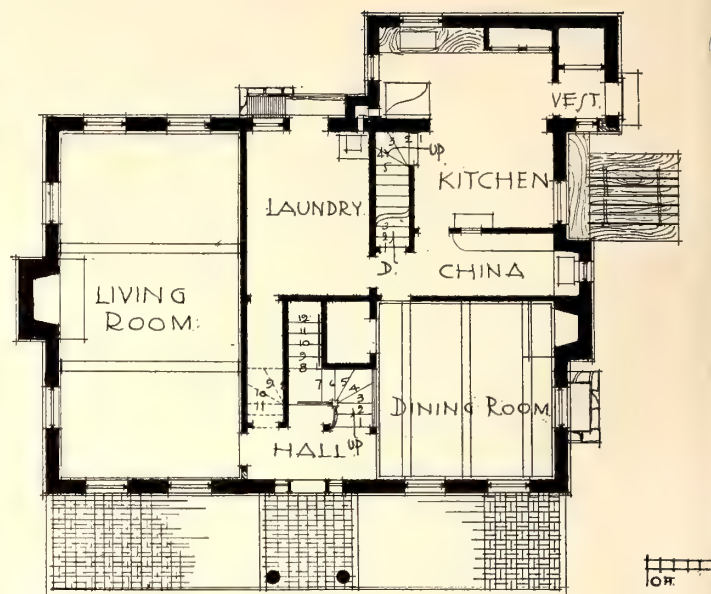
The search for plants must be begun early in the season if they are to be transplanted in spring, for it would not be safe to attempt their removal after they have begun to make active growth. April is a good time to look up your plants, and May a good time to bring them home. Later on, if you come across a plant that seems desirable, mark the place where it grows so that it can be readily found, and transplant it to the home grounds in fall, after its leaves have fallen.

In transplanting shrubs and herbaceous plants, study carefully the conditions under which they have grown, and aim to make the conditions under which they are to grow as similar to the original ones as possible. Of course you will be able to do this only approximately, in most instances, but come as near it as you can, for much of your success depends on it. You can give the plants a soil similar to that in which they were found growing, and generally, by a little forethought and some planning, you can arrange for exposure to sunshine, or a shaded location suited to the requirement of the plants. Very often it is possible to so locate them that moisture-loving plants can have a damp soil by planting them in low places or hollows where water stands for some time after a rain, while those which prefer dry soils can be given places on knolls and stony places from which moisture drains off rapidly. In order to do this part of the work well, you will find it necessary to study your plants well before removing them from their home in the woods and fields. Aim to make the change as easy as possible for them. This can be done only by imitating natural conditions, or the conditions under which they have been growing up to the time when you undertake their domestication.

(Concluded on Page 360)



An Exposure on Three Sides Gives Ample Ventilation and Light to the Living-room



FIRST STORY.



HOUSE of more than passing moment is that built for E. H. Fay, Esq., at Wellesley Hills, Mass. It is built of secondhand brick, and follows the general character of the New England farmhouse.

The brick used for the exterior of the walls were taken from a city dwelling which had been torn down, and after being partly cleaned, but with some of the mortar clinging to them, they were rebuilt into the walls of this house. There are no stone trimmings of any kind; the terrace and piazza being laid in brick, in herringbone fashion. There are no stone lintels or sills; the wooden sills being carried over are enough to cover the brick. The shingled roof is left to weather finish. At each side is a large outside chimney.

The entrance has a quaint Dutch door, with brass knocker, which opens into the square hall in the center of the house, that contains a Colonial staircase. The second floor is framed entirely on oak beams which were cut on the estate and hewn roughly into shape; they are exposed in the rooms below, giving the old-fashioned beamed ceiling effect.

The great living-room is at the left of the entrance. It has exposures on three sides, and contains a large open fireplace, which is in the center of the outside wall. It has facings and hearth of brick, and a mantel of simple and artistic design. The woodwork is

An Old-Brick House

Wellesley Hills

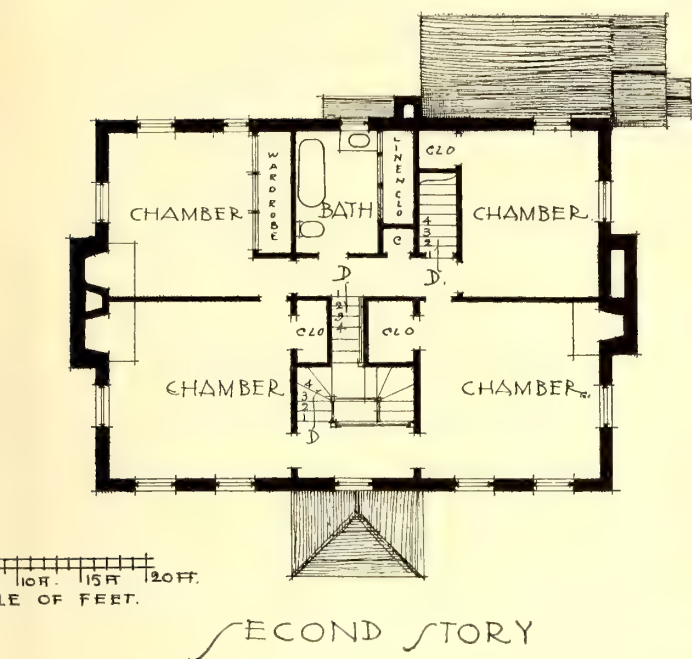
By John



The Bricks Used for this House Were Taken from an Old Dwelling in Boston and Used for the Outer Walls



The Entrance Porch and



A Brick Fireplace Is the Feature of the Dining-room

of Interesting Form

Massachusetts

Jenks

of oak finished in an effective manner, and its simple lines harmonize well with the crimson walls and the fine old pieces of Colonial furniture with which the room is furnished.

The dining-room, which is to the right of the entrance, forms an important element in the vista upon entering the hall. It is trimmed with oak, and is finished in a simple manner, with oak beams showing in the ceiling and in the walls. An open fireplace with brick facings and hearth and a mantel of simple design is the chief feature of this room. A large china closet, with dresser and sink, separates the dining-room from the kitchen and laundry. Both of the latter are fitted up complete with all the best modern conveniences.

The arrangement of the bed-rooms on the second floor is the best possible for light, air and convenience, as each room is exposed on three sides. The stairway is quite an unusual one, with a combination for two different uses of the stairs from the second landing into two different halls. There are four bedrooms on this floor, three of which have open fireplaces, as well as a bathroom. The servants' bedrooms and trunk-room are in the third floor. There is a heating apparatus and fuel-rooms in the cellar, which is built under the entire house.

Mr. Philip B. Howard, of Boston, Mass., was the architect, and the cost was less than if it had been built of new materials.



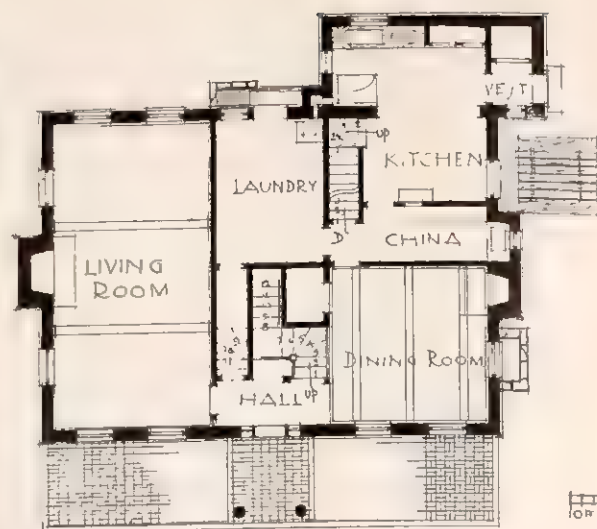
Terrace Before the House



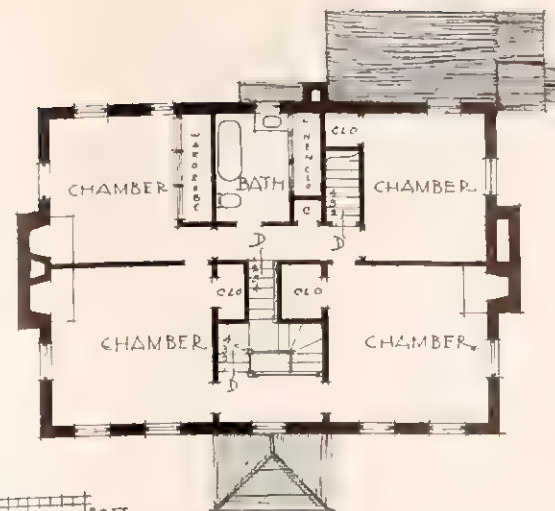
The House Frankly Reproduces the Character of an Old New England Farmhouse



An Exposure on Three Sides Gives Ample Ventilation and Light to the Living-room



FIRST STORY



SECOND STORY



A Brick Fireplace Is the Feature of the Dining-room



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An Old-Brick House of Interesting Form

Wellesley Hills, Massachusetts

By John E. Jenks

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The Bricks Used for this House Were Taken from an Old Dwelling in Boston and Used for the Outer Walls



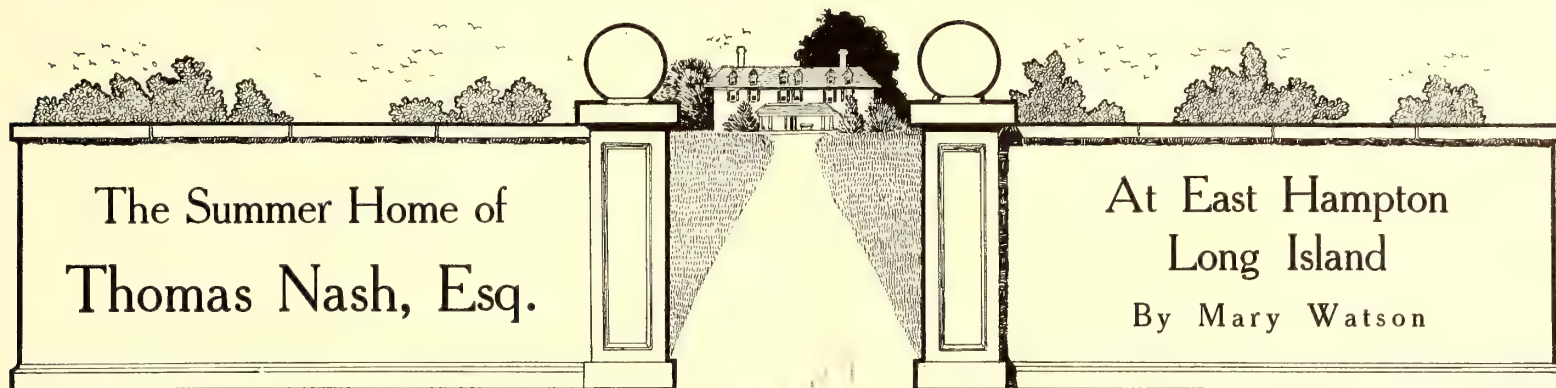
The Entrance Porch and Brick Terrace Before the House



The House Frankly Reproduces the Character of an Old New England Farmhouse



The Terrace Before the Entrance Front of the House of Thomas Nash, Esq.



VERY individual dwelling must be, to a certain extent, a product of circumstances, for the reason that it must conform to the life of the family who are to inhabit it.

The plans must be arranged for the needs of the family, and the extra design must be influenced by the environments surrounding the site upon which the house is to be built. Having settled these two points, the restrictions lie only in the materials which are to be selected for its construction, and the amount of money to be spent in its erection. There is also another feature which is important, and that is, the treatment of the interior decorations in harmony with the furnishings which the various rooms are to contain.

The summer house at East Hampton, Long Island, which is illustrated in these pages, was built for Thomas Nash, Esq., of New York, who was also its architect.

The site is a corner one, and the house stands with its end facing the main thoroughfare, from which a driveway extends in and around a circle placed in front of the entrance at the side of the house. A terrace with a floor paved with brick and reached by stone steps extends across the entrance, connecting with the covered piazza on the side. Bay trees and hydrangeas lend a tone of color to the approach. A platform, covered

with a hood supported on Ionic columns, leads to the doorway. The exterior of the house is covered with shingles, which are left in their natural state, weathering to a silver gray color, and harmonizing with the ivory-white painted trim. The doorway opens into a square hall, whose walls are paneled with cypress from the floor to the ceiling and stained a soft brown. There is a good deal of quaint antique furniture placed along the walls. The joists of the ceiling are exposed to view and are stained. An unobtrusive staircase rises at the side of the entrance.

To the right of the hall is the living-room, which is treated in a similar manner with paneled walls and exposed ceiling timbers, all stained and finished in a soft brown tone. The color scheme of the room is good and harmonizes well with its furnishings. There is a large open fireplace built of red brick, with facings and hearth of the same; a carved mantel shelf, supported on carved brackets, completes the chimney fixtures. An alcove, raised two steps from the main floor, completely inclosed with glass windows and surrounded with paneled seats, is an attractive feature of this room. French windows open onto the piazza, which is inclosed with glass and finished as an outdoor living-room. The den is fitted up in an attractive manner.

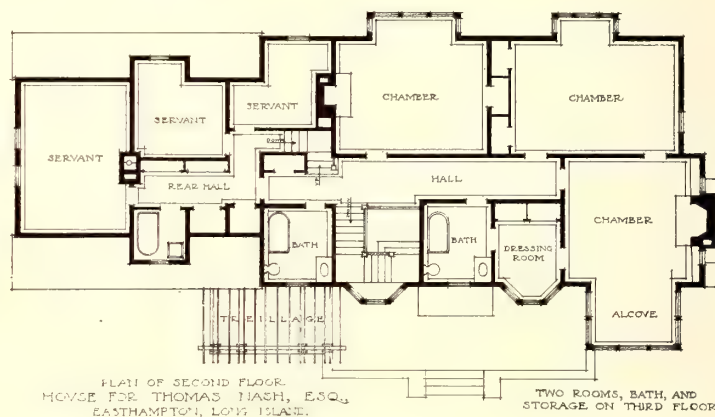
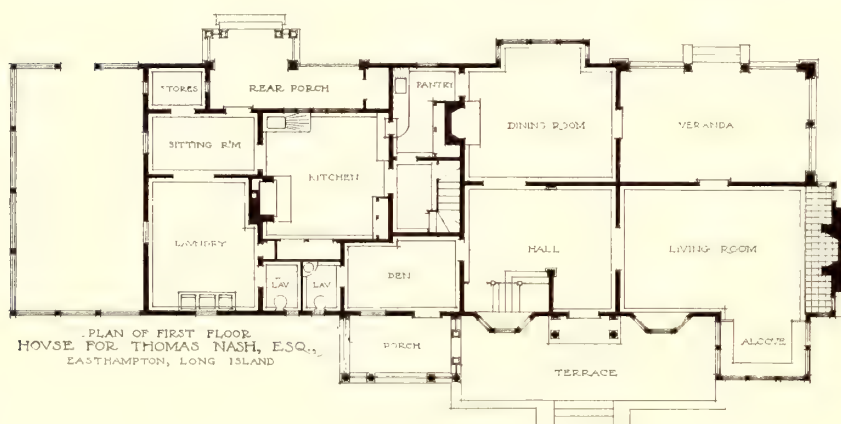
The dining-room has paneled walls similar to those of the hall, which are stained in a reddish-brown color to har-



A Fine Doorway Gives a Distinct Character to the House



The Principle Living-rooms Have a Southern Exposure



The House Grounds Are Agreeably Planted with Shrubs and Flowers



A Brick Fireplace with Partially Paneled Walls Are the Features of the Dining-room



The Walls of the Living-room Are Paneled with Cypress, Stained a Soft Brown

monize with the mahogany furniture with which the room is furnished. An open fireplace with Welsh tile hearth and facings and an attractive mantel, and the bay window, with casement frames, are the features of the dining-room.

The butler's pantry is fitted up with sink and dresser, and by communicating with the kitchen through a servants' hall and staircase forms a double isolation of the kitchen and its dependencies, and prevents any possibility of the kitchen odors penetrating the remainder of the house.

The kitchen and laundry are well fitted with all the best modern conveniences, and the servants' hall is also



A Side Porch Leading from the Terrace

a good feature and a necessary one for a well equipped house. These apartments are trimmed with yellow pine treated with a hard oil paint. An inclosed clothes yard at the rear of the house is an important annex to the country house. The second floor is trimmed with white wood and painted ivory white; it contains the owner's suite, consisting of a large bedroom, dressing-room and bathroom, and two guest rooms and bathrooms. The bedrooms have ample closets, and two of them have open fireplaces with tiled facings. The extension over the kitchen contains three servants' bedrooms and a bathroom. The furnace is in the cellar.



Dignity Is Maintained in the Hall with Its Paneled Walls and Antique Furnishings

Something Concerning Driveways

By George H. Miller



ROADMAKING is commonly supposed to be the work of the engineer. It is because of that supposition that so many of our drives and roadways in parks and private places are permanent eyesores to the traversers and so unbecoming to their locations as to render the best treatment of adjoining grounds impossible. The temperament of the successful engineer is not the esthetic temperament. So before settling upon the location of a drive because it is the shortest or perhaps by a trifle the most economic, we should stop and consider the very many things which will affect and be affected by it, and which may eventually make it the longest, meanest and most extravagant. Since every piece of property offers new opportunities and problems to be solved, it would be impossible to lay down any set of rules concerning the relation of a drive to the general division of the parts; yet there are a few facts concerning treatments that certainly should be suggestive to those who have the subject before them.

If a road is straight and of some length it should be edged with an avenue of trees with the lines converging into some object of substantial interest. An avenue perspective is very fascinating with the distances diminishing between the tree trunks and the lights and shadows playing on the cool ground. The small, round-headed trees have a formal effect in both shape and shadow, but the taller, graceful, arching elms lend the rarest dignity and airy shade. One method is to plant the elm type on one side to admit the air and the maple on the other to furnish shade, but this arrangement gives a one-sided and hardly justifiable appearance. A double row on each side is more effective. For instance, a row of gingkos in front of a denser foliaged tree makes an attrac-



The Carriage Drive Should Approach the House Parallel with the Front

tive avenue, though very formal and perhaps with a weakened shade. Never should a pyramidal tree be overarched with the branches of one like the elm, but the well colored foliage of a small deciduous tree is quite effective in front of the darker, stronger green of the taller pointed evergreens. Always retain a single variety in a single row rather than introduce different colors, thereby lessening the dignity.

An avenue should be plain, stately, symmetrical and clean. Occasionally a formal curved road is edged with evenly spaced trees to carry out a more important feature, on which its regularity is based, but the trees on the outer edge will surely have a foreshortening and cramping effect. The inside row should be lost in a thickened group, shutting off the discordant view of the trunks beyond.

But even though the shortest distance to a destination is by the straight path, yet among the naturally trodden paths and roads there is seldom found a straight line. While the avenue still retains its ever-pleasing effects, the graceful movement and diversified charm of the irregular naturally curved drive is superseding it in popularity. As a rule the curved road should not be treated with avenue planting, but rather with naturalized grouping at the sharper curves linked with specimens on an open greensward, a treatment lending change and free-



Adapt the Drive to the Landscape, Not the Landscape to the Drive



Break the Monotony with Heavy Striking Masses Which Serve Excellently in Improving the General Appearance of the Grounds

dom and more in harmony with the spirit of the drive. Do not crowd it with detail that requires time and study to appreciate, but rather break the monotony with heavy, striking masses, which can perform important functions in the general building of the grounds. The inside of a curve should always have some planting to prevent the desire to cut cross-corner while still inviting to surprises further on.

An architectural erection, designed as prescribed by the style of the house, adds stateliness and beauty to an entrance. The planting should, as far as possible, make the immediate surroundings a part by itself, and always out of view of the house. The tall evergreens have a very signal effect, and the dwarf varieties, artistically arranged, are of inestimable value in creating a permanent formality so desirable in such a place. If possible, there should be a separate entrance from a minor thoroughfare for the service drive, which is distinctly for the accommodation of kitchen, coal-chute, refrigerator, stable and pit. At any rate, never allow the carriage drive to pass the service parts of a place, perhaps forcing the passer to peep into the domestic ways of the employees or to scan the family wash sunning on the laundry green. The carriage drive should approach the house parallel with its lines, and its immediate settings should be part of the study of house design, never neglecting to pave the portion where the horses stand under the porte cochere with cement or other washable material supplied with a drain.

Although a drive is usually requisite, it is not a necessary evil in a landscape, and yet should be as inconspicuous as possible, always occupying a position bordering or dividing parts of grounds. Never

adapt the landscape to the drive, but the drive to the landscape. If you have a soft, open lawn, do not cut it with the hard lines of the drive, but rather blend the drive in its borders, making it a seemingly natural part of its composition, showing no evidence of the material cuts or fills, engineering difficulties or signs of other efforts in its construction, but appearing in harmonious formation with its adjoinings, as if nature had shaped its position and course. It being a means to an end, make it a pleasing and attractive one, a perfect feature and a part of the larger scheme, possessing individual charm and beauty, introducing and reflecting the tastes to be expected at the end.

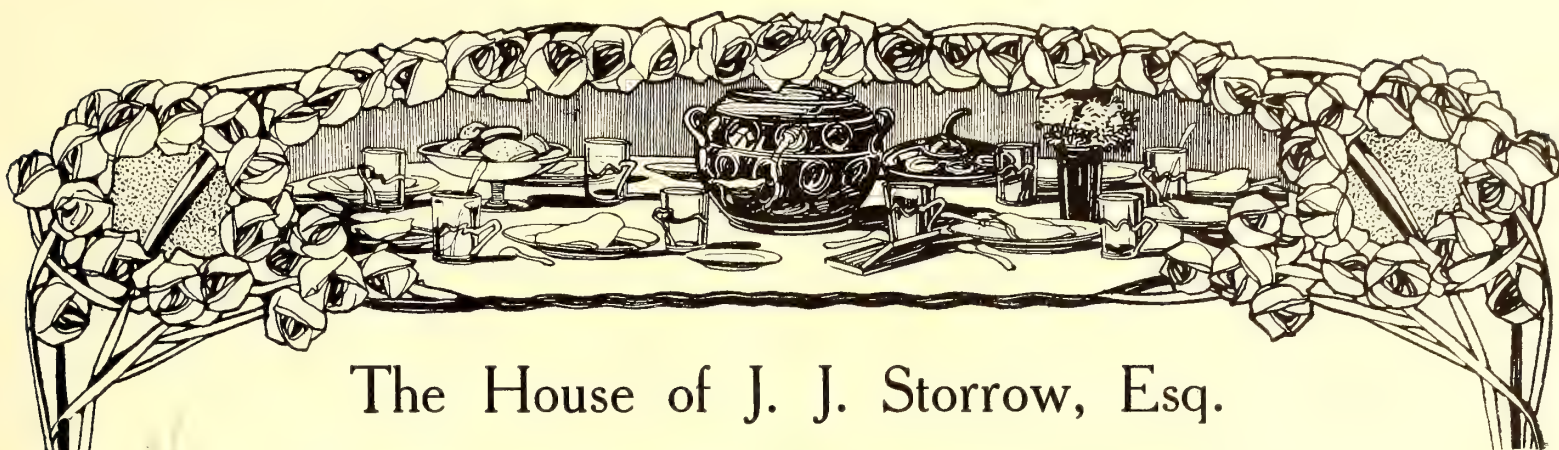
It is interesting to study roads and drives from the point of view just stated. The observing ruralist will find much to interest and instruct in taking notes of such matters. More important and helpful will be the training and judgment

that one will unconsciously acquire. Comparatively few persons understand there is an art of road designing that is quite distinct from road making. Even the latter is hardly understood as it should be; but the former is almost completely unknown and unappreciated because the fundamental principles underlying it are not generally recognized.

The road should be designed exactly as the house is designed and the floral planting. It is true the road has a utilitarian use, but, in rural regions, it has a beauty use that is often of the most important kind. A road should be more than a mere line between two points, but should, in its form, its direction and the planting on its borders, directly contribute itself to the esthetic effect of the scene.



The Foliage of a Deciduous Tree Is Very Effective in Front of the Darker and Stronger Evergreens



The House of J. J. Storrow, Esq.

Lincoln, Massachusetts

By Ralph de Martin



MR. STORROW'S house is planned with an open forecourt in which the entrance porch is built. It is a spacious structure, designed on very agreeable but simple lines. It is a house that bases its appeal to the spectator wholly on its structure. Built of Harvard brick, its exterior is absolutely without ornamental features save for the bands of enameled tile let into its walls, and the patterns—diamonds and triangles—of the same material disposed at various intervals. These elements of decoration are so cleverly used, and are themselves so good, that they give a strong individuality to a structure whose elevations themselves are good and interesting. The chief string course on each front is formed of green Mercer tiles, square, set diagonally—brilliant little notes of color disposed in the brick of the main wall set vertically. Other bands or string courses are formed of the Harvard brick, arranged in an individual way, so that the perfectly flat surfaces of these walls contain, within themselves, a good deal of structural variety. The triangles and diamonds are somewhat bolder in their treatment, since a greater variety of colors are used, and some attempt at pattern ornaments made. But their whole effect is extremely harmonious, and they thoroughly well fulfil their function of giving variety to a wall otherwise nearly plain. The polychrome decoration thus introduced is everywhere kept in complete control, and there is no attempt anywhere to use the colored tile other than as decorative adjuncts.

The entrance front has two gable ends, one on each wing inclosing the forecourt. The brick walls rise clear to the

eaves, but the window treatment is different in each, and thus a structural modification is obtained at the outset. The curtain wall inclosing the center of the building is perfectly flat save in the center, where it is projected forward slightly for the entrance porch and a gable at the summit. The porch is a graceful, simple little structure, with a projected roof with oak beams upheld on two Roman Doric columns of gray stone. The columns have capitals of white marble, and the roof is edged with green copper. The exposed rafters and widely projected roof suggest Japanese motifs in a very delightful way. The entrance door has two narrow windows, glazed to the floor, on the sides, the three being inclosed under a single segmental arch. Both frame and arch are without moldings, the opening being emphasized only by the set of the brick. There is a large segmental

topped window above the porch and a smaller one of the same general shape in the third story. The window treatment of the adjoining walls varies in each wing.

The terrace or inner front exhibits a perfectly straight wall. Its principle feature is the center, where the wall is continued above the eaves of the roof, and is crowned with a group of windows, which constitute a loggia in the third story. The roof of this part is carried on widely exposed oak beams. A ravishing view of the surrounding country can be had from the loggia, the outlook being of wonderful extent. The windows of the front have segmental tops without frames, save for the setting of the arch bricks. There are no inserted panels on this front, and but a single band of diagonal square green Mercer tile. A noticeable feature of all the openings of this house, including the



A Niched Wall Fountain Is at Each End of the Sun Parlor



The Projecting Roof of the Entrance Porch Is Distinctly Japanese In Feeling

doors and windows of both fronts, is the iron-barred mosquito screens with which they are fitted. Unlike most screens of this description, these are highly ornamental as well as protective, and add greatly to the effect of the windows. It is more important to note that the house is of fireproof construction throughout, with Guastavino system to the third story and hollow tiles above.

The house is entered through a small, low vestibule, with walls paneled in wood and a glazed door opening into the hall. This is a large square room, occupying the exact center of the house, with windows in the opposite wall opening into an inclosed porch or loggia. It is floored with the warm red Moravian tiles, which are more and more coming into use for exactly this purpose. The walls are of Caen stone, with plain wide borders around the doors and other openings, giving the effect of panels. The doors themselves are either glazed or of hard wood, arranged in large plain panels. The room is covered with a light colored Guastavino vault, rising from a plain band-like cornice. The fireplace is on the left; it has a Caen stone mantel without facings, but is lined with red brick. A stone seat is placed against the wall opposite the mantel, and above it is hung a piece of tapestry.

The stairs to the second floor ascend on the right of the entrance door. The steps

to the second story are of white marble, on which is a green carpet. The second-story hall has a floor of Moravian tile, and walls of pale green. The stairs to the third story are similar to the lower ones, but the steps here are of white tiles. They lead directly to the billiard-room, placed at the top of the house. It has a semicircular roof, the walls being paneled in walnut to the beginning of the vault. There is an alcove in the front of the room, lighted by the wide window in the apex of the central gable of the entrance front; it is completely lined with walnut on all three sides. The room is lighted by brass sidelights, and six great lamps hang above the billiard table. On the opposite side it opens directly onto the loggia at the summit of the inner front. It is paved with brick, and affords, as has been said, enchanting views across the country. The top of the roof is utilized as an observatory and resting place, and here the whole countryside may be viewed in every direction.

The chief rooms of the house are, of course, on the first floor and adjoin the hall. The living-room is on the right, with windows on the inner front, and is reached by a door toward the back of the hall. It is covered with a rounded vault, segmental in section, rising in three great curves across its breadth. Its walls are paneled in plaster, with wood moldings, in white and French gray, the panels above the base



The Loggia on the Summit of the Entrance Front Opens from the Billiard-room



The House Is Built of Harvard Brick, with Bands and Ornaments of Brightly Colored Mercer Tiles

wainscot extending to the ceiling with curved tops. Bookcases line the walls at each end, being thus on each side of the entrance door and on each side of the window in the middle of the opposite wall. The fireplace is beneath the central arch on the right as one enters; it has a plaster mantel,

lined with brick. On each side are two huge sofas covered with mouse-colored velvet. Most of the other furniture is covered with crimson damask. The window curtains are turquoise blue velour, and the floor is of hard wood, on which is spread an Oriental rug. The room is lighted by



The Hall Is Paved with Moravian Tiles and Has a Vaulted Ceiling



The Study Is Completely Shelves for Books. It Has a Wood Mantel with Red Brick Facings, a Red and Blue Rug and Leather Furniture



The Dining-room Is Paved with Moravian Tiles and Is Paneled to the Ceiling in Oak

bronze sidelights fixed to the walls.

A door at the further corner of this room gives entrance to the study, which is situated at the corner of the entrance front, but which has no direct connection with the hall. It is a library in a very true sense, the walls being lined with built-in bookcases completely around the room, save where they are interrupted by the chimney breast. The wood is oak, and the mantel is of the same material, faced and lined with red brick. The book shelves extend solidly from floor to ceiling, the lowest section of each set of uprights consisting of a drawer. The hardwood floor has an Oriental rug, and the furniture is covered with greenish-brown leather. The window curtains are white, and the white ceiling is perfectly plain save for a simple molding on the edge. The room has windows on two sides, those on the hill front being provided with built-in seats.

The dining-room is on the right of the entrance, and is entered directly from the hall. It has a floor of Moravian tiles hexagonal in pattern, thus differing from the other tiling in the house. The walls are solidly lined throughout with oak, the boards being placed upright, with large square panel-markings made by a dark line. A narrow molding suffices for the cornice, and the ceiling is plain and white. The fireplace has a facing of mottled green marble, with a lining of red brick. A narrow shelf above it is supported on simple brackets. An old gold mirror hangs on the wall above. The room is lighted by side lights. The window curtains are of thin white silk.

One end of the dining-room is glazed, that is to say, is almost completely occupied, filled by three great windows.



The Arched Roof of the Living-room Makes It Unusually Cool and Airy

These open into an inclosed porch, which constitutes the breakfast-room. The walls and piers are wholly of brick; the floor is paved with Moravian tiles. There is a beautiful outlook into the adjoining woodland from the outer windows of this room. A pantry adjoins the dining-room, but the kitchen, laundry and other service rooms are in the basement, which open onto a lower part of the hill on which the house is built.

The surrounding grounds have been treated with a good deal of taste and care. The loggia in the center of the house opens onto a small brick space, covered with an iron frame and awning. All the ground without forms a terrace, beautifully grassed, inclosed at each end with a stone wall.

The whole of the front of the house is inclosed within a great outer court extending well beyond the forecourt formed by the house walls. It has a low stone wall, emphasized at the entrance with low piers. Vines are already making good headway upon it, and the border inside is planted with flowers and shrubs. The boundary wall extends around the kitchen yard to the left, where the driveway reaches a lower level. Here the basement of the house is built of stones, with segmental windows and arches to support the superstructure.

The stable is a building of some size, consisting of a center and two wings disposed around a central court. It is built of Harvard brick, like the house, relieved by a single band of tile. It is roofed with square tiles, green, yellow and brown. Its courtyard is inclosed within a wooded fence, painted green. Higher up, toward the house, is the tennis court, on its own special plateau and quite high above the entrance drive.



The Stable and Carriage House Is Disposed Around an Open Court; It Is Built of Brick with a Slate Roof

New Ant Lore

By George Bullock



THE red weaver-ant, which is wide-spread in the tropical Indies, the Malay Archipelago and Polynesia, inhabits globular leaf-nests in colonies. Such a nest is formed by joining together the edges of adjacent leaves with silky webs. It is not very easy to observe the little creatures at their work, as they endeavor to scare off every intruder by death-defying attacks in force. An observer, Dr. F. Dofflein, who, in a high tree-top in Ceylon (defying the itching biting), made a rent in such a nest, saw how a detachment separated itself from the hundreds of little defensive animals and sought to repair the rent. The female working-ant digs the sharp claws of her two pairs of hind legs into the smooth leaf, the forelegs and antennæ high in the air, and the masticators open for biting. A repair detachment, drawn up in a straight line beside each other, grasps the edge of the other leaf in their jaws and draws it nearer to the edge of their own leaf, while the little creatures, fixing the claws of all six feet in the leaf, carefully set one foot round the other backward, and at the same time thereby draw the edge of the further leaf nearer. Other female working ants hurry hither, biting off the still clinging remnants of tissue, and bearing them to the ends of leaves or of branches, where, simultaneously letting go, as if at word of command, they cast to the winds the conjointly detached shreds. After much exertion the repairers brought the leaf edges so close together that the actual work of weaving could begin. There now appeared female workers with larvæ between their jaws, and moved the pointed end of the larvæ back and forth, from edge to edge, each time pausing a little, that the spinning thread that was being detached from the larvæ might take hold upon the edge of the leaf. In one of the accompanying figures can be seen the tongs-like, larvæ-clasping jaws of the weavers, who were now in the manner described covering the rent with a thick, silky web. The web is so tough that it may be cut with scissors. The weaver-ants make use, then, in its manufacture of their larvæ at once as distaffs and as shuttles. They are the only animals among whom, so far, the use of a tool has been observed. In the construction of the globular leaf-nests the presence of cochineal-insect colonies is especially attractive, as the excretions of these creatures are a real treat to the ants.

If we betake ourselves from India to South America, here, too, are found ants that are good at weaving. More remarkable, however, there are the leaf-cutter ants, which lay out, manure, weed and reap regular fungus-gardens. The leaf-cutter or dragging-ants are so named from their attacking in dense swarms shrubs and bushes, cutting out pieces of leaves and dragging them long distances into their nests, always built covered, where the pieces of leaves furnish the subsoil for fungus-gardens. These female leaf-cutters often in a short time entirely strip shrubs and saplings of their foliage. The cutting out of the pieces of leaves they accomplish by turning upon their hind legs as a center and roundly cutting out a piece of leaf, as with a pair of scissors, with their saw-like jaws pressed together. Though the pieces of leaves often have four times the length and several times the weight of the ant, they are yet conveyed over paths which take the little creatures hours to travel. The paths unite in a highway, where from all sides laden working-ants converge and present a peculiar appearance—rows of curiously formed pieces of leaves tottering forward, under

which the bearers almost disappear. These dragging-ants are eminently skilful road- and vault-engineers. With their jaws they tear off in the course of the way to be built one small bit of earth after another, and pile them right and left in a wall; elsewhere they vault the way over till it becomes invisible. Certain female workers hurrying, without employment, hither and thither upon the way look after the improvement of the roads. They form in a certain measure a flying-column, which has to remove the obstacles to traffic often found upon the way.

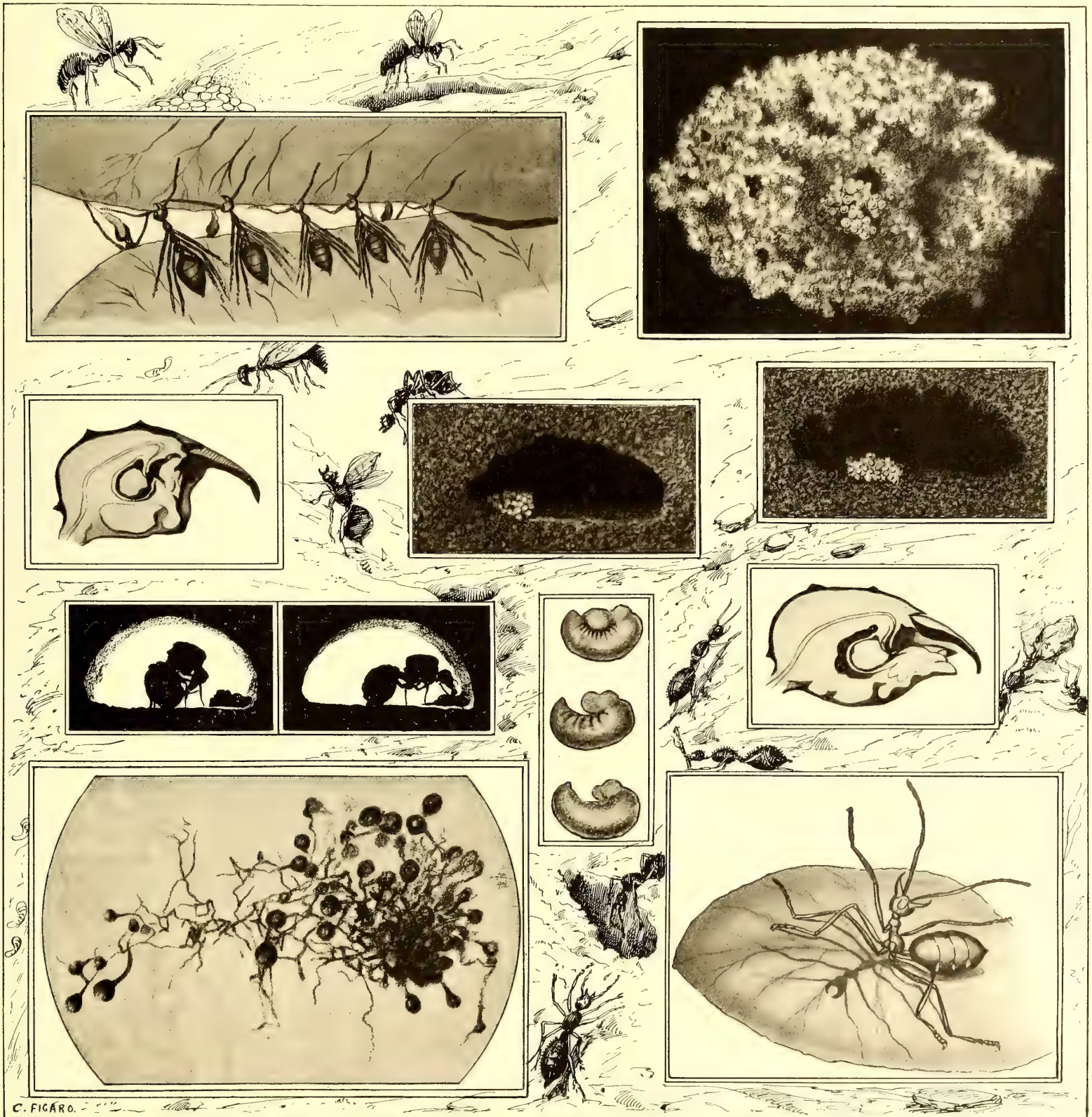
The fungus-raising ants (of which there are several kinds) build their nests in cavities underground, under stones, roots of trees, the bark of inwardly rotting, fallen tree-trunks—in fine, everywhere where either they are well covered by nature externally, or where they themselves, by means of piling up leaves and twigs, can manufacture a protecting covering. On the inside of the nests is found merely a gray, sponge-like, incompact mass, which extends up to two yards in length and several handbreadths in height, but never reaches to the walls of the cavities. In the spongy growth, which abounds in apertures, the ants actively work, and their eggs, larvæ and pupæ lie scattered around. What, however—contrary to all expectation—are not discovered in the nest are the quantities of pieces of leaves brought in, whose loss bushes and shrubs are mourning. Have the ants eaten the pieces of leaves? No; for the creatures have been kept imprisoned, and they prefer going hungry to feeding on leaves. When, however, they were given something from the incompact, gray, flocculent mass of fungus, then they at once began to use this "free estate" in the laying-out of a fungus-garden, to which they gave the chopped-leaf material as fostering subsoil. The pieces of leaves are cut up into many little bits by means of chewing and pressure. The bits are thoroughly soaked, kneaded and shaped, and finally inserted in the fungus-garden as systematically as a mason presses down into its bed the last brick into a new, just-laid course.

Ants, as is well known, sometimes desert their homes. When, in consequence of unwelcome disturbances, the ants leave their nest, then the fungus-garden is taken along. It is, as manifold experiments have indubitably shown, their only source of nourishment. They eat the little globules, rich in plasma, which appear to the naked eye merely as white dots on the surface of the mass of fungus. By means of minutely exact experiments it is established that only this one fungus, and no others, grows upon the carefully constructed fostering-soil. Foreign material is weeded out, while an enormous number of the smallest female working-ants continually removes the foreign filaments and spores of fungus accidentally dragged in, which might overgrow the garden. We here have before us, then, pure cultures, carried out by animals, of a wholly definite fungus.

These ants too, are infected by the modern colonizing spirit. When a queen of the ants burrows into the earth after the marriage flight and plants a new colony, shut off from the outside world, occupied only with egg-laying and the breeding of her young, she has nevertheless then brought with her from the old nest "free estate" for the laying out of a fungus-garden. Of the extraordinarily remarkable proceedings at the planting of such a colony, Dr. Jakob Huber-Pará recently published his observations made upon the genus *Atta sexdens* in several series of experiments. We see in

the illustration a breeding-cave of a mother of ants, and a little fungus-garden in it. How did it get in? From the old nest the little *Atta* female took along in the back part of her mouth-cavity a tiny globular flock as a nucleus. This flock consists of filaments of fungus and chopped-leaf material, and furnishes the foundation for a new fungus-garden. In the first days the fungus ball is picked to pieces; the individual parts grow, and in from eight to ten days they form a disk half an inch in diameter. After twenty days more the fungus-garden measures nearly an inch, and already shows at the edge clusters of globules. The queen ant

plants the fourteen-day-old garden with about a hundred eggs. The question now arises, Where, then, does the fungus get the nourishment for growth? At first scarce a fiftieth of an inch big, it soon measures an inch. The mother-ant is all alone, never leaves the cave; so neither does there come in the pieces of leaves, which normally, chopped, soaked and kneaded, serve the fungus as fostering soil. With what, then, is the little fungus-garden manured? Huber observed that the mother-ant tears out flocks of fungus with her mandibles, and, sitting on her hind pair of legs, presses against her turned-in hinder body, from which a



Scenes from the Life of an Ant

Red weaver-ants repairing a rent in their nest
Sagittal section of the head of a little *Atta* female
The mother-ant manuring the fungus-garden (instantaneous views)
So-called cluster of globules

Breeding-cave
Feeding larvæ, showing different stages of assimilating an egg

Fourteen-day manured fungus-garden with about one hundred eggs
Breeding-cave. Vertical section of a cave of *Atta sexdens* (excavated in the open air)
Sagittal section of head, with changed position of fungus-ball
Female working red weaver-ant

brownish-yellow drop is secreted—a drop of manure. The flock of fungus, pressed into the garden again with the feet, absorbs the appended drop. With her own excretions, then, the ant manures the young culture. At the same time, however, this mother-ant lays daily about fifty eggs. How can she, without taking nourishment, thus constantly produce manure-drops and eggs? How is the conservation of substance and of energy here fulfilled? Of the fungus the little animal does not eat, even when it already ripens globules. The riddle's solution lies in the fact that the mother-ant consumes a part of her own eggs, and later, when little female workers begin to hatch out, perhaps receives from these nourishing juice offered in the open mouth. Of some two thousand eggs that the creature lays within forty days merely the tenth part produce; a great, or rather by far the greater, part is fed to the larvæ. At first, the mother herself stuffs the egg into the jaws of the larvæ; later the female workers attend to it. When the larvæ are still small then an egg suffices for the feeding of several; the indusium, emptied of its contents, is consumed by the mother. One of our pictures illustrates how the larvæ suck up their as yet egg-shaped little sisters.

At the earliest after fourteen days (reckoning from the beginning of the breeding-time) the first female workers appear, little creatures a twelfth of an inch long, soon followed by others twice as large. The little female workers feed on the globules of the fungus-garden, and are zealously intent upon taking good care of their territory and suffering the loss of no fertilizing drop of excrement. The mother-ant also still manures the fungus-garden in the customary way, but confines herself more and more to egg-laying, as soon as through an exit dug by themselves the female workers have

once reached the outside world and have there begun the leaf-cutting. Now vegetable fertilizing material is dragged in, chambers are built, the fungus-garden expands. The mother-ant, who at first had her hands full, taking care of the brood and of the garden, is now relieved by the numerous results of her labors. She is served, and fed abundantly; the eggs are taken away from her at once on appearance, and buried in the cavities of the fungus-garden. The larvæ are fed by the female workers with eggs or globules. A bustling activity reigns in the covered structure, now consisting of several chambers.

Though the planting of a colony may succeed in the way just described, yet it is still possible that the mother-ant is received into another nest, and in consequence is not obliged to stay many days alone, nourishing herself from herself, in a subterranean chamber. But when one considers with what skill and prudence these leaf-cutter ants plant and cultivate their fungus-gardens; how they tear off and expose upon the chopped, kneaded leaf material fungus mycelium; how they build ways, streets, tunnels, vaults, bridges, walls and ceilings, and keep road-improvement columns—then, indeed, one must acknowledge the possibility that a consciousness, too, of this their action is present in the little creatures. If this is so the more reprehensible will then be found the experiments of an English-writing lady, who tried to show by means of drowning, suffocating, starving and letting thirst, as well as poisoning of ants, how tenacious of life the little animals are. The result of her heartless tortures was ludicrously small. Our ants hibernate; and the little *Atta* female described above lives many weeks working, laying eggs and manuring, without taking other nourishment than her own eggs. Truly the ants must be hardy creatures.

The Wild Garden—A Plea for Our Native Plants

(Concluded from Page 343)

Not knowing just what plants we will have, as the collection grows, of course we can have no definite plan, at the beginning, to work to. Consequently there will be a certain unavoidable lack of system in the arrangement of the wild garden. But this may possibly become one of its chief charms, after a little. A garden made on this plan—which is really without any plan—seems to have evolved itself, and the utter absence of all formality will make it a more cunning imitation of Nature's garden. In arranging the shrubs and plants put the larger ones in the background, as far as possible, and keep them there. By arranging the plants in such a manner that they are graduated in height as they come toward the foreground, you secure an effect of breadth which adds vastly to the attraction of the garden. It gives you a sense of distance which large plants near the path, and in the immediate foreground, effectually destroys.

Never set your plants in rows. Nature never does that, and she is the only gardener who never makes a mistake. Go into the fields and forests and note how shrubs and plants are arranged there. Here a group, there a group—a result that seems to have no plan back of it, and yet, who can say that Nature did not plan out carefully every one of these clumps and combinations? Try to make your wild garden look as much like a real wild garden as possible, and the closer you study Nature's methods and pattern after them the nearer you will come to success. Avoid formality as you would the plague if you want your wild garden to afford all the pleasure which can be got out of it. Nature's arrangements are always restful in effect, and never give one a sense of premeditation. Like the Topsy of "Uncle Tom's Cabin," they "just grow." But in order to successfully imitate Nature it is absolutely necessary that we should familiarize ourselves

with her way of doing things, and we can only do this by studying from her books as she opens them before us in every field, and by the roadside, and the woodland nook. The secret of success, in a word, lies in getting close to Nature's heart.

Among our early flowering plants will be found the dogwoods, the plums, the crabapple, the wild rose, and smaller plants like the trillium, the houstonia, the bloodroot, the claytonia, and the hepatica. Among summer bloomers we have aquilegia, daisy, coreopsis, cranesbill, eupatorium, meadow sweet, lily, helianthus, enothera, rudbeckia, vervain, vernonia, and many others that grow here and there, but are not found in all parts of the country, as those named above are. Among the shrubs are elder, spirea, clethra, and others equally as desirable. Among the late bloomers are solidagos, asters, helenium, ironweed, and others which continue to flower until the coming of cold weather. The sumach, which is too large for a shrub and too small for a tree, deserves a place in every collection, because of the magnificent color of its foliage in autumn. Among the desirable vines are the ampelopsis, which vies with the sumach in rich color, in fall; the bittersweet, with its profusion of fruitage as brilliant as flowers; and the clematis, beautiful in bloom, and quite as attractive later, when its seeds take on their peculiar plumes.

Though I have named only the leading varieties of our best-known plants, the list, it will be observed, is quite a long one, and no one need fear of not being able to obtain plants enough to stock a good-sized garden. The trouble will be, in most cases, to find room for all the plants which you would like to have represented in your collection, after you become thoroughly interested in the delightful work of making it. It is a work that will grow in attraction as you go on with it.



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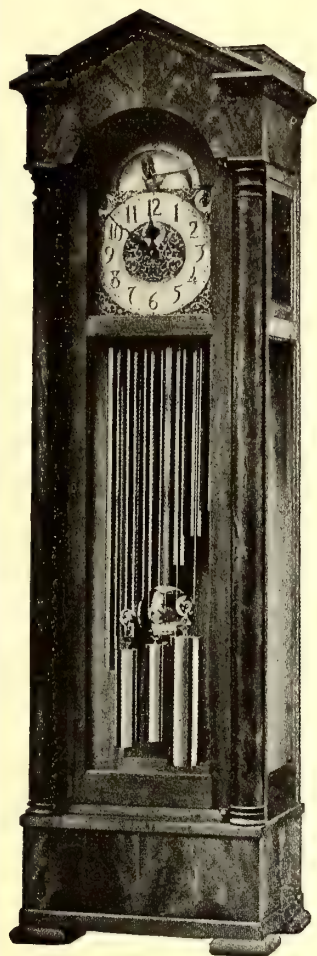
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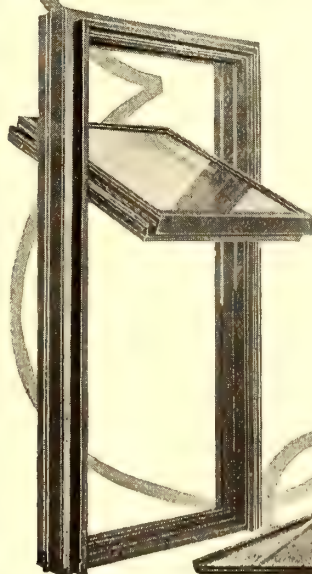
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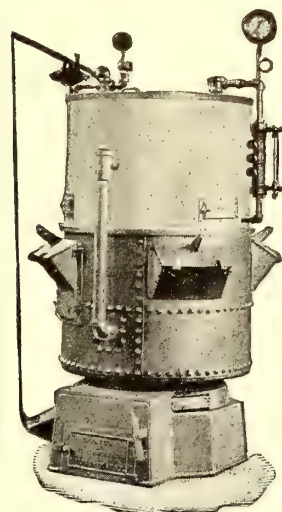
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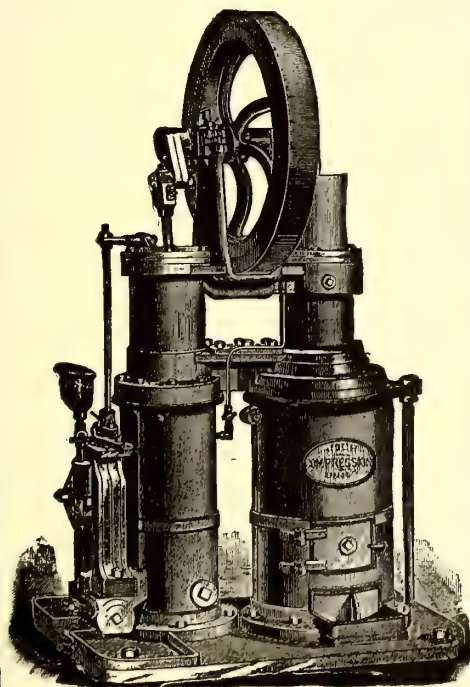
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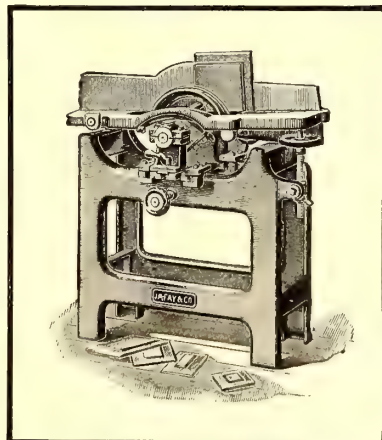
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By Ida D. Bennett

FOR large beds on the lawn there are no more valuable plants than the *Erianthus ravennae*, whose tall flower spikes reach an altitude of twelve feet or more. These may be easily raised from seed and will bloom the second summer. It is best to plant the seed in the hot bed in early spring and after the other plants have been removed for outdoor planting to transplant the *erianthus* in the vacated space and grow them on there until time for planting out where they are to remain the following spring, or they may be transplanted when large enough into a cold frame, and wintered there until the next year.

For combining with the *erianthus* there is nothing more handsome than the *Eulalia zebrina*, with its foliage barred with bands of white and its sprays of feathery flowers. It is not as tall or robust a grower as the *erianthus*, but is so distinct and handsome in color as to be one of the most striking of the hardy grasses. The two may be combined with a center of *arundo donax*, the tallest of our hardy grasses. The *arundo*, however, will not stand the severe winters as will the other two, and requires much protection.

Where these tall grasses are used for the center of the beds such drooping grasses as the pampas grass or the *Eulalia gracillima* should be used for border, both of these having a most graceful, weeping habit, the stems growing upright and the leaf blades drooping downward like a fountain of green. All of these may be grown from seed, but the pampas grass is not hardy at the north until two or more years old, and requires considerable protection even then, but by taking it up in the fall and wintering it in a warm cellar it may be grown very successfully in cold climates.

Certain of the annual grasses are very beautiful, especially when grown as a border to the taller sorts. Among these none is more beautiful than the *Pennisetum rupeelianum* or purple fountain grass. This has the graceful fountain-like habit of growth and showy purple plumes of flower heads; it may be raised from seed, flowering by mid-summer.

The most effective form in which to grow these ornamental grasses is in oval beds or in long, hedge-like rows. As a border or hedge there is nothing finer. Their culture is simple, the necessary conditions being a deep, mellow soil of marsh muck, well decayed, and a liberal quantity of old manure. They require an abundance of water during the growing season, but no water should be allowed to stand about their roots in winter. A good way to manage the watering of the bed of ornamental grasses is to pipe water into it and keep it almost a swale a considerable part of the time. The plants make such a tough, solid network of roots that any ordinary watering can not penetrate them once they have dried out, so that in order that any artificial watering may be helpful it must be continuous.

Where one does not care for the effect of solid beds of grasses some of the low-growing bamboos may be used in front of the taller growing grasses. *Bambusa Metake*, which rarely exceeds ten feet in height, and presents a more common altitude of about six feet, combine very effectively with the grasses, and the taller *B. argentea*, *B. verticillata* and *B. vulgaris* are very good to use in the center with the tall grasses, but do not stand the wind at the north very well, and need to be taken up and wintered in the greenhouse or a dry, light cellar. Possibly if a sufficient protection could be given the tops in the way of

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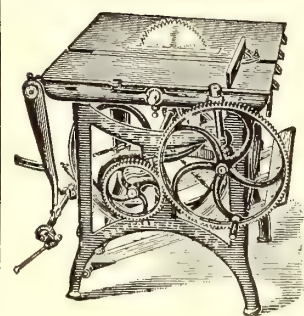
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wrapping or covering, they could winter successfully, as the roots seem to be perfectly hardy, standing several degrees below zero unprotected in the open ground. When they have reached a height of eighteen or twenty feet they are very graceful. Like the grasses they require an abundant water supply, and the plan of piping water into the beds answers admirably with them.

Along the border of the grass beds certain bright hued flowers may be grown effectively, notably the tritomas or red-hot poker plant and the scarlet cardinal flowers. One of the prettiest bits of natural gardening I ever saw was a little island in a river, covered with tall grasses and cardinal flowers. The flowers reflected in the water below—bits of scarlet fire in a sea of waving green.



A BACHELOR'S CUPBOARD. Collected by A. Lyman Phillips. Boston: John W. Luce & Co. Pp. 210. Price, \$1.00.

The writer of this book undoubtedly intended it as a handbook for bachelors of all classes, for his second chapter—and perhaps the one that will most attract the reader—is devoted to the "Impecunious Bachelor," while further on is a price list of wines, ranging in every possible manner, from \$60.00 per dozen down. A great variety of human beings may thus find something of interest here, even if the suggestions are not equally applicable to all alike. The bachelor whose ideas of bachelor home life centers in food and food supplies and in the methods of preparing and cooking food, with perhaps a thought or two of clothes, may find not a little amusement and some instruction in this cheerful book. To such, no doubt, the cooking recipes will seem eminently useful.

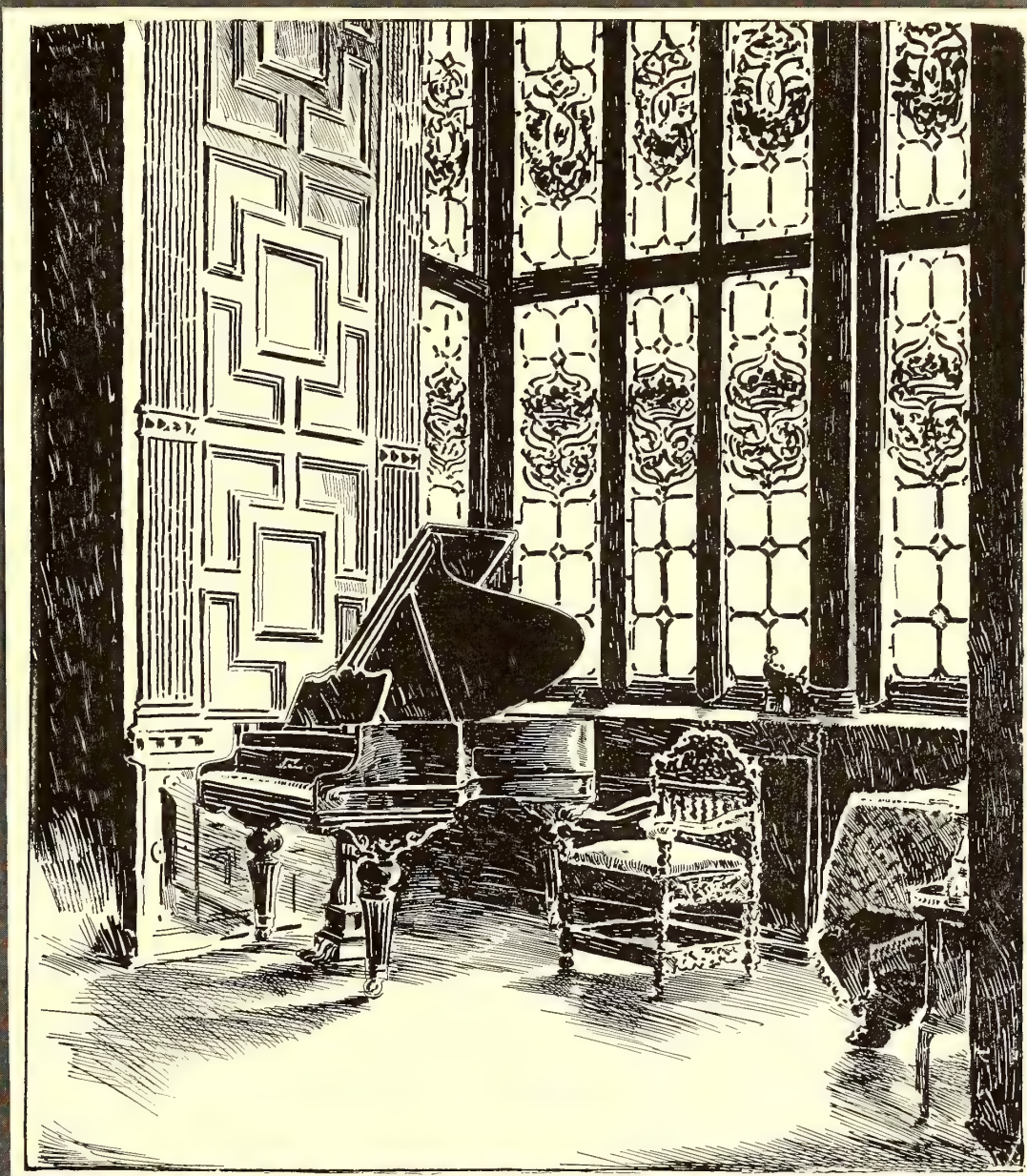
THE ENGLISH FLOWER GARDEN AND HOME GROUNDS. By W. Robinson. New York: Imported by Charles Scribner's Sons. Pp. 14+974. Price, \$6.00 net.

That ten editions should have been called for of this large and important book is the highest testimony to its value. That it is written for and is exclusively concerned with English gardens makes its utility in America necessarily somewhat secondary, but it is filled, from cover to cover, with a host of valuable information, admirably arranged and condensed, and is so complete in its treatment that no garden lover can wisely omit it from his shelves.

The book consists of two parts. The first deals with the question of design, the aim being to make the garden a reflex of the beauty of the great garden of the world itself, and to prove that the true way to happiest design is not to have any stereotyped style for all flower gardens—and there is a world of truth in this single comment—but that the best kind of garden should arise out of its site and conditions as happily as a primrose out of a cool bank. This portion of the subject is treated in numerous chapters with ample fulness. The second part of the book consists of a dictionary catalogue of most of the trees and plants, hardy and half-hardy, that thrive in English gardens. Like the earlier portion, this part is amply illustrated, so that the identification of any plant should be easily made. The book is thus a veritable treasure-house of English garden lore, much of which is equally adaptable to America and American conditions.

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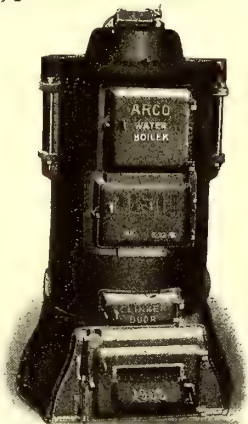
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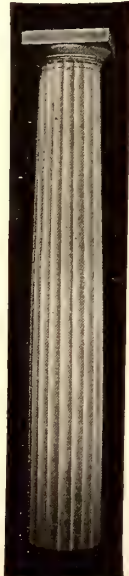
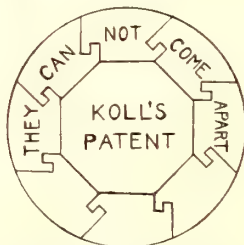
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GARDEN WORK FOR SEPTEMBER

Eben E. Rexford

THERE are many flowers that win our friendship. One of these likable plants is Ten-week Stock, which used to be known in our grandmother's day as Gillyflower. It has many good merits. It grows sturdily with most ordinary care, and in all kinds of soil. It blooms in late summer, but it is at its best in fall, after frosts have put an end to the beauty of most annuals. It comes in several colors—red, pale yellow, purple, pink, and white—and it has a delicious fragrance quite like that of the Carnation. Its flowers are produced in spikes, and are therefore well adapted for cutting. They last well, if the water in which they are placed is changed daily.

Stock is easily grown from seed. But many seedlings will produce single flowers, and these are not particularly desirable. As soon as buds are formed, one can tell which plants are going to have single flowers, by their long, slender appearance. Such plants should be pulled up at once, and all the strength of the soil given over to the development of double varieties. So hardy is the plant that we frequently find it in full bloom after we have had severe frosts.

Cosmos is always admired, when seen in full bloom, but it is so late in flowering that the frosts of October are pretty sure to cut it down before it reaches its prime. This can be prevented by covering the plants on cold nights. Drive some tall, stout stakes about them, and over these spread sheets or thin blankets. In this way the frost can be kept from injuring them till late in the season. A large plant covered with bloom is a magnificent sight. If the plants can be started in a hot-bed, and kept going well during the summer, they can be coaxed into bloom by the middle of September. For backgrounds, or hedges, or screens, we have few better plants, as it grows rapidly, is extremely bushy and compact, and has a pretty, finely-cut foliage which would make it well worth growing if it had no flowers.

* * *

The annual Aster is another late-flowering plant which deserves mention. Nothing excels it in floriferousness, and few plants can show richer colors, or a wider range of them. Red, carmine, rose, blue, purple, white—there is variety enough to suit all tastes. And variety is not confined to color. We have tall ones, and dwarf ones, "branching" varieties, and some that are almost little shrubs in their compact, bushy growth. We have some that resemble the Rose in form, some that take the name of "Peony flowered" because of their resemblance to that favorite of the border, and others that are so like the finest Chrysanthemums in nearly every respect that dealers often dispose of them for that flower. The branching Aster, with blossoms borne on stalks a foot or more in length, is one of the finest of all flowers for cutting. It lasts for two weeks, if the water in which it is placed is changed daily. The pure white, the pale pink, and the soft, delicate lavender varieties ought to be grown in large quantities to cut from for house, and church, and all forms of decoration where substance, and lovely form, and beautiful coloring are desirable. Anyone can grow this flower. Sometimes the black beetle attacks it, and often ruins it in a short time, if left to do its deadly work, but a few applications of ivory soap suds will soon rout this enemy. While the Aster comes into bloom in early September, it will be found in its prime when frosty weather comes, and it will

still be magnificently effective when early winter shuts down upon the garden.

* * *

Strong Carnations for winter use are best obtained from what are known as field-grown plants, in fall. These are plants which are grown in the open ground during summer. They make a strong, vigorous growth then, and have been pinched back until they have a good many short branches starting from the base of the plant. All our leading florists can furnish them. Order them in September. Pot them in a rather heavy loam. Do not use large pots. Keep them out of doors as long as you can do so safely. When they are brought indoors give them a place in a room that is without fire-heat, if possible. But let it be light, and sunny. Shower frequently to prevent injury by the red spider. Water moderately.

* * *

In the gardens of many amateur florists will be found strong, sturdy specimens of the Marguerite strain of carnation. These are grown from seed sown in spring. They do not come into bloom until rather late in the season, as a general thing. Indeed, many of the plants will be full of buds not quite ready to open when cold weather comes. But some of the plants will have bloomed before that, and if any of them show double flowers, of good color, they may be put into pots for house-use for the coming winter. They will bloom much more profusely than the ordinary greenhouse sorts, but their flowers will not be so large, and some of them will be altogether lacking in fragrance. Their range of color is limited, as compared with that of the greenhouse varieties, but among a score or more of seedlings you can almost always find some good pinks, and whites, and pale yellows.

THE PANSY BED

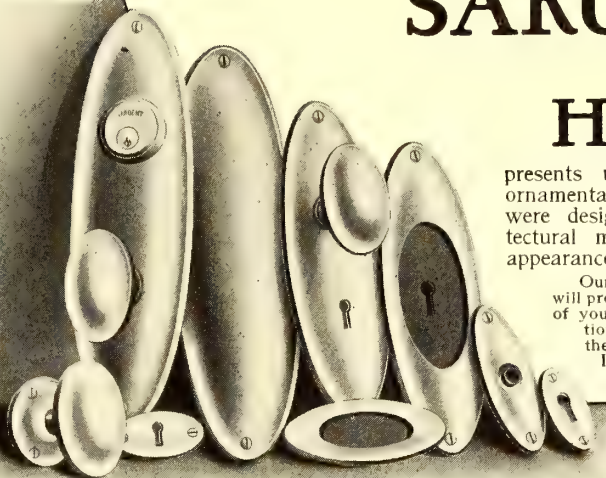
By Benjamin Ide

THE pansy is a plant that responds magnificently to any intelligent treatment, and its requirements are neither exacting nor expensive. Given good seed one is well on the way to notable results, and it remains only for the gardener to co-operate with nature to be richly rewarded. It is, however, useless to expect fine pansies from cheap or common seed. Good pansy seed can only be raised by scientific methods. It is out of the question to save seed of any special strain or color from beds of mixed flowers, and this in a large measure accounts for the seeming high price of the best florist's strain of seed. One should look with suspicion on cheap packets of seed or seed offered for premiums. Good pansy seed of the purest and finest strains can not be purchased for less than twenty-five cents a packet, and certain strains are well worth the fifty cents asked. These high-priced strains will not give many, if any, of the common self-colored pansies, as yellow, white, purple or black, but will be made up of the finest blotched, ruffled and rayed varieties and the various reds, pinks, coppers, bronze and all that is newest and best in the pansy world.

The best time for sowing pansy seed is in August, about the fifteenth of the month, and from then on through September. The seed should be sown in a cold frame or spent hot-bed, and where the latter is used it will be necessary to add sufficient earth to replace the bulk lost by the settling of the manure underneath. This should be added sufficiently to bring the soil in the bed somewhat higher than that of the land outside, and good drainage should exist, either from the lay of the

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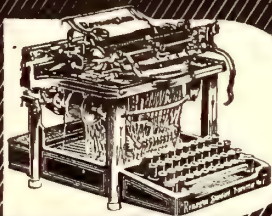
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land itself or by supplying a drain in one corner of the bed by digging a hole down to the bottom of the pit, filling in with broken stone and the like and covering the top with sphagnum moss. This will effectually carry off any water that may gain access to the bed by a sudden winter thaw or spring freshet.

As pansy seed is small the soil should be made fine and free from all roughage—sifting the upper layer through a coal sieve is a good way to prepare it. It will also be well to mix the under soil with a liberal amount of old, well rotted manure; pansies are voracious feeders, and even in their youngsterhood require abundant nourishment.

The seed may be sown broadcast in plats and covered with an eighth of an inch of fine soil or sand sifted over it, or it may be sown in shallow drills and the earth drawn over them. In either case the earth must be pressed down snugly above them that the tiny sprouts of the newly germinated seeds may lay hold at once on the nourishment provided for them.

Each plat of seed should be separated from its neighbor by narrow strips of wood sunk somewhat below the surface of the soil and extending an equal distance above it. This prevents the seeds of one plat mixing with those of an adjoining plat, as is quite sure to happen if they are watered too freely or exposed to a rain. Each plat should be carefully labeled with the name of the variety and the date of sowing. It is also advisable to add the name of the florist where seeds from more than one florist are planted; this enables one to keep tab on the different purchases and judge of their quality.

After the seeds are settled in their beds they should be carefully watered with a rose of sufficient fineness to insure against washing the seed from the ground, covered with a newspaper and the sash closed until germination takes place; this will be in from eight to ten days.

As soon as the pansies are well up the newspaper may be removed from over them and placed immediately above them on the glass and the glass slightly raised to admit air. If the weather remains hot through August and September it will be necessary to protect the pansies from the direct rays of the sun during the hottest part of the day by lath screens placed over the glass, which may be raised part way so as to admit abundant air but not sufficiently to dry out and heat the beds by the direct rays of the sun. The beds should not be allowed to dry out, neither should they be kept excessively wet—just moist and cool. As the days grow cooler the sash may be removed entirely and the screens only placed during the hottest part of the day, and finally, as the plants attain size and strength, entirely abandoned.

If the plants have been planted in long drills, and there is sufficient room between the rows, it will benefit them to transplant every other plant into new rows between the old that they may have more room to develop; a still better way would be to have two hotbeds, and make the planting in one and transplant when the plants are large enough into the other.

At the approach of severe freezing weather the beds should be closed and protected with rugs and the like to shut out the cold and shed rain. Air may be given during the middle of the day during winter at any time when the ground is not frozen, but never let the sun shine on the plants when they or the ground is frozen. Above all things avoid constant thawing and freezing if you would have good live pansies at the coming of spring.

If the pansies have been sown in good season and well cared for they will be found well budded when the frames are opened in March

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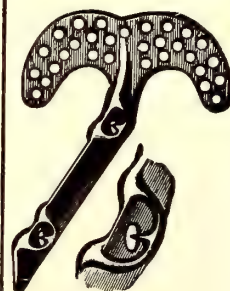
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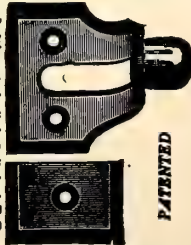
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or April. The plants may be transplanted to the open ground as soon as the ground can be worked in the spring. The pansy bed should occupy an open sunny position, but not the hottest on the premises. It should not be crowded back against the wall of a house or building, but should be so placed as to allow of the full sweep of the wind across it. It should have little shade—none direct.

The best soil for growing pansies is leaf mold and old, well-rotted cow manure. Never place fresh manure in the pansy bed; the pansy is a lover of coolness and moisture, and fresh manure is very heating and must not be used. Where leaf mold is not procurable good garden loam will grow very good plants, but is not as desirable as the leaf mold. This, by the way, is easily manufactured at home if one will but save the leaves and litter that go to furnish the autumnal bonfire, and much good will result as well as much smoky annoyance be saved one's neighbor if instead of raking the leaves up into a heap and burning them they are all carted to some out of the way nook and piled up and left to decay; occasionally they may be turned over to hasten their decay, the hose turned or any waste water from the house added; this in a year or two will produce the finest kind of leaf mold for the garden and for potting soil, and if it is unsightly during summer vines may be grown over and around it, certain gourds are much at home there, and their great snowy, ruffled blossoms rival the finest clematis.

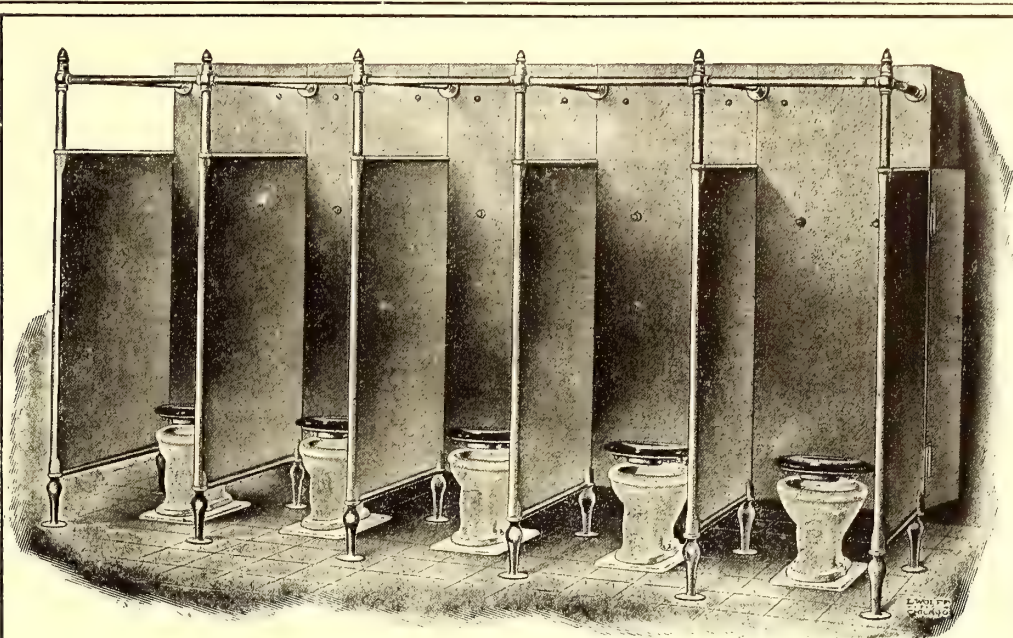
In working up the pansy bed it is always best to trench in the manure that it may be well below the surface and no great amount of weed germinate. This is best accomplished by laying aside one spade width of soil at one side of the bed, filling the empty space with manure and throwing the next row of spading on top of this, instead of merely turning it over. About one wheelbarrow load of manure should be added to each square yard of earth. The surface of the bed should be made very fine and even and the rows for the plants evenly marked on the surface.

Pansy plants should be set about nine inches apart each way, alternating the plants in the row. In transplanting make a hole in the soil with a trowel, set a plant in place, pull up a little earth and pour in a liberal quantity of water, and when that has filtered away draw up the remaining earth and press firmly over the plants. Make a fine dry mulch on the surface of the bed and do not protect in any way. The plants will need no further attention for three or four days, when watering may begin.

As the pansy grows its roots close to the surface of the ground, frequent and copious waterings are necessary; this must be given with regularity and in sufficient quantity to prevent drying out. My own experience is that a thorough watering at night and again at noon will result in the very finest pansies. I know that watering flowers in the middle of the day is against all accepted theories, but experience is sometimes to be preferred to theories, and the pansy is not injured, as are many plants, by water applied while the sun is shining.

To insure fine flowers and abundance of them it is necessary to remove all seed pods, or rather all withered flowers, as fast as they form; this will necessitate going over the beds plant by plant and blossom by blossom twice a day; this is the most interesting feature of pansy culture, but the result well repays the extra effort. For this reason it will be found more convenient to grow the plants in long narrow beds which may be easily reached across.

Along in July, or possibly as late as August, according to the season, it will be found that the blossoms are growing small and scarce and the branches, long and scraggly; if now atten-



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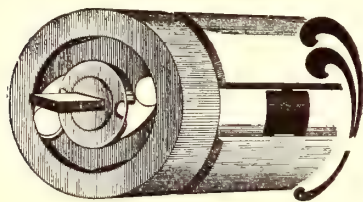
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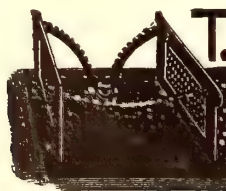
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tion is given to the growth of the plants, it will be seen that new growth is starting at the crown of the plant; when this appears the tops of the plants should all be removed down to this new growth, which will rapidly come forward and produce flowers in abundance almost, if not quite, equal to those of the early spring. An occasional dose of liquid manure—say twice a week—will greatly benefit these fall blossoms, as by this time the first richness of the bed will have become exhausted. Pansies may be carried over to the second year and will give very satisfactory results, but will not be quite as fine as the young plants. The only satisfactory winter protection for the open air pansy bed is found in a covering of ever green boughs or a blanket of snow; leaves settle around the crown of the plant, freeze and cause decay; evergreen boughs when used should be arranged to rest on some support—a pole lying on notched sticks lengthways of the bed, their tops down so that they may shed rain and bank snow; this gives the ideal protection and should be employed whenever available. The blanket of snow, when it stays on all winter, leaves nothing to be desired.

PLANTS THAT TELL THE WEATHER

By W. G. Fitz-Gerald

SOME flowers there are that care nothing for the weather. Wet or fine, hail or snow, they make a brave show. Such are the sweet-pea, fuchsia, heather, hyacinth and others of the "bell" flowers. But even a casual glance at our fields will show that many other flowers and plants are by no means so indifferent. Thus a meadow that will be radiant with flowers on a sunny day is utterly transformed when the clouds are lowering and torrents of rain falling.

Nor is this change due to the prevailing grayness of the day. For if you examine the meadow at close quarters you will see that it is mainly the flowers themselves that have wrought the change. Many plants have closed up their blooms and entirely hidden all the gay petals. Others, again, have merely drooped earthward, presenting only somber colored backs to the falling rain. Much the same thing happens on banks where in early summer the little *Stellaria* shines forth like so many stars from a brilliant green background.

The moment bad weather comes these stars disappear, and the bank they adorned becomes dull and uninteresting. The pretty star of Bethlehem is equally sensitive and shows or hides her sweet face just as the weather alternates from bad to good, and vice versa. On a fine day our garden borders may be brilliant with white stars, but the moment clouds appear and the rain descends they withdraw themselves and fold up their little petals with anxious care. The green sepals now close over and form an impenetrable rain coat, showing only a series of ragged-looking plants, from whose pointed leaves and striped tapering buds the water trickles harmlessly.

The Eschscholtzias, too, are "fair weather" flowers, flaunting gorgeously in the sunshine, but shrinking from bad weather. Let the day be merely dull and they will not even awake from the night's sleep, but remain tightly closed. True, if morning opens with promise they are lured to unfold their orange petals, and bask a little at breakfast time; but should the day refuse to fulfil its promise, the Eschscholtzias calmly wrap up their flowers with as much care as a little girl does her dainty muslin frock, fearing the slightest wetting or the menace of lowering clouds.

These folding processes are sometimes simple enough, but when a long spell of wet



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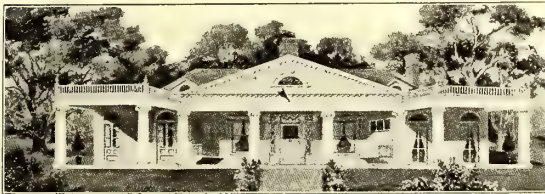
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weather is threatened each petal folds into a little twist by itself, so that four small spiral pyramids stand up on each flower stalk, to face the downpour in perfect assurance.

Even the familiar daisy is a well known "barometer-plant." Does not its yellow eye open out to sunny days and close to duller ones? And its big coarse brother, the dandelion, seems to be just as sensitive. In the case of the daisy, however, each head is made up of many flowers, and it is the petal rays of the strap-like florets that wrap over and protect the inner tubular stationary ones.

As to the dwarf or carline thistle, so notorious are its faculties for indicating the weather that its dry flower heads are actually used in certain rural districts as weather gauges. When the sky is cloudless and the air dry and clear, the flower-heads open out boldly, with the dry scaly leaves surrounding the inner flowers radiating all round with perfect confidence. But let the air grow humid, indicating that rain is not far off, and the radiating ring rises to close domelike in protection over the flower's heart. I have often watched the water running off this "dome," just as quickly as it does off any sloping roof built with human hands.

In England the well-known little scarlet pimpernel is called the "poor man's weather glass," so quickly do its little blossoms follow changes in the weather by opening and closing. The pimpernel is quite wonderfully reliable as a weather prophet—far more so than many an expensive barometer hanging in a rich man's house.

This flower finds a living on the driest and poorest waysides, and is perhaps the best known of all the barometer plants. Such composite flowers as the chicory, nipple-wort and marigold are also sensitive in the matter of weather, as also are such bell flowers as the clustered and nettle-leaved campanulas.

Opuntias, flaxes, white magnolias, crocuses and stately water lilies are all infallible indications of weather to come. I am often asked what actuates plants and flowers in this way. The fact is, their object is to safeguard their greatest treasure. For in the flower's heart are placed the tiny seeds in a case, and round them are equally valuable stamens carrying the precious pollen-dust fully exposed to the air.

Thus if cuplike flowers such as the Eschscholtzias remained open in wet weather, a miniature rain pool would form and fill each blossom to the brim from one end of its life to the other, washing away and spoiling the sodden pollen dust. Moreover, no insect would care to dive through the pool in search of honey! And there would be no messengers to carry out the marvelous acts of fertilization from one flower to another.

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GUNTER'S

MAGAZINE

SEPTEMBER

15 CENTS



For this reason do many flowers seek to protect their pollen; and the more sensitive the plant to slight atmospheric changes the more successfully does it guard its treasure. Now let us consider the barometer plants that do not actually close their petals in bad weather, but droop their heads so that a cup becomes a hanging bell, presenting only its back to the rainfall.

The little wild geranium stands up pink and bold on bright days, but droops perceptibly in damp weather, until at length its face is to the ground. The pretty mauve heads of the sheep-bit or scabious act in just the same way, as also does the Claytonia—a cheerful enough creature in fair weather but very dejected and insignificant on a showery day.

I have often watched a patch of Alpine potentilla that grew in a rock garden. On a brilliant spring morning it was a blaze of gold, and the tender green foliage was thickly studded with exquisite little yellow blossoms. But on a dull wet day the short stems turned quite over and lay almost at right angles to their original positions, while the yellow cups were turned entirely upside down.

Other plants that prefer this method of protection for their pollen, and therefore pose as weather prophets, are the cinquefoil, potato, wood-sorrel, campanula, chickweed and willow-herb. The last-named is especially wily. On a bad day you will see most of the flowers bent over, while a few remain erect. Here, you will say, the barometer role is uncertain and left to chance. But investigate more closely and you will see it is only the older flowers that do not bend. All the younger ones have done so, and a little further knowledge of each flower's life story explains the point.

The life of each is but three days. On the first two the stamens are ripe, and scattering their pollen on all insect visitors. The third day, however, the function of the stamens is ended, but the carpels containing the seeds are now ready for inoculation by pollen for the first time. Here is a clever scheme to ensure cross fertilization; but its interest for us is that the flowers do *not* droop over on the third day, because there is no longer any need to protect the pollen.

But, it may be asked, if plants and flowers think rain injurious in this way, how is it there are notable exceptions? The fact is that most do make provision for their flowers against the rain, but such provision can be made in many ways. There is no real need for plant or flower to turn into a "barometer" to effect this. Thus in such plants as the monkshood, violet, yellow rattle, snapdragon, sweet-pea and others, their curiously shaped petals provide a kind of permanent roof over the stamens. In the globe flower the yellow sepals never open out entirely, but always close the stamens in. And in the arums the green sheathing spathe is a permanent protection.

Again, many plants that bear their buds in an upright posture to begin with, invert them into a drooping attitude directly they begin to open, and remain thus until after the pollen has matured. Then the stalks straighten themselves again, and the fruit is borne upright. This happens with the fritillaries, the water avens and brugmansias, as well as the deadly night-shade, lily of the valley and many others.

Moreover, some plants have little lids on their anthers or pollen-boxes. Thus the laurels and bastard toad-flax are so provided, and these lids close in when the weather is damp, and only open when the sun is out and the air quite dry. In the case of the bastard toad-flax, these wonderfully ingenious "lids" are so sensitive that they will shut up within thirty seconds of the approach of moisture!

AMERICAN HOMES AND GARDENS

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Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

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Cows Drinking at the Brookside at Eventide

AMERICAN HOMES AND GARDENS



Volume IV October, 1907 Number 10



"Millbrook Farm"—The Old Ice House Beneath the Great Catalpa Is Now a Vine-covered Summerhouse

Monthly Comment



THE latest word in building fashions is one fraught with the saddest woe. The foyer hall, it appears, must go, and for the very good and practical reason that it is not suited to courting uses! A pretty state of affairs, forsooth, and one that calls for instant remedying. The parlor, the old-fashioned parlor, if you please, seems to be an indispensable adjunct of the most noble art of love-making. And the parlor has been on the decline, lo, these years and days. In many cases it has utterly disappeared from the modern house plan, and in others it has survived as a "reception-room" of the smallest possible dimensions. These narrow quarters might be supposed to be ample for such delectable proceedings, but even they are not without their undesirable qualifications, and the only safety, the only absolute safety, seems to be in the immediate and complete extermination of the foyer hall with its open stairway, its spacious hospitable dimensions, its utter freedom, its elegance, its convenience to every one not engaged in the aforesaid occupation which cries aloud for its extermination.

THE truth of the matter seems to be that bashful young men will not even so much as enter such spacious and semi-public apartments. The proud possessor of one of these new-fangled rooms, therefore, finds his daughters on his hands indefinitely, while the maiden who once rejoiced in the latest thing in family rooms finds herself compelled to pass her evenings in solitary loneliness or surrounded by such uninteresting company as is provided by her immediate family. Rural regions, it is said, feel these distressing circumstances much more keenly than the cities, for in rural regions the parlor has a historic place in the art of courting that the foyer hall utterly refuses to supply. Everyone knows how important courting is, and the end of this very useful apartment is not only in sight, but would appear to have actually arrived. Fathers with marriageable daughters and foyer halls—perish the combination—may, therefore, be expected to place their houses in the market for immediate sale at marked-down prices.

THE scarcity of rural help of all kinds was never more marked than at present. That the farmers have been in a bad way for help of all kinds for several years is very generally known; but the scarcity has now extended to every form of rural help, and rests quite as heavily upon the well-to-do in places near the large cities as upon those residing at remote spots. The satisfied dependable servant is becoming so rare an article as to have almost completely disappeared. The changing of plans to suit the convenience of servants has long ceased to be a joke, and has become a grim reality. One may, indeed, descend on one's country seat with a full retinue of retainers, but one is fortunate if the return in the fall is made in the same triumphal fashion. Nor is this all. A really much more serious problem is the difficulty of employing local labor for any purpose whatsoever. The man and woman who could be hired by the day for odd jobs, or even for extended jobs, is no longer to be had for love or money. Vast areas of rural communities everywhere are absolutely devoid of laborers, while the skilled workman, the carpenter and the plumber, are apt to be so much occupied with steady work that their services can only be had at odd hours and at most highly advanced compensation. This state of affairs doubtless reflects a general prosperity, and certainly indicates a very general activity, but it greatly increases the difficulty

of rural and suburban living, and is one of the many hardships one must undergo in the effort to be comfortable. And it is a condition that affects the rich as well as those less well off. Money can not hire men when there are no men to be hired.

NO ONE should imagine that the country is a cheap place in which to live. One can, of course, for a given sum, acquire more land and a more commodious house than one could own in a city for an equal amount. One may pay actually less in taxes, but almost all other expenses are likely to be higher. There is no saving in meats and vegetables; there is no saving in the cost of help; there is no saving in merchandise supplies; there is no saving in the cost of fuel. Oil will cost less than electricity, but where the latter is to be had it will be invariably preferred. One actually needs more things in the country to be comfortable than were deemed essential in the city. If one's place is of any size at all a man must be kept for the outdoor work, and at least one horse, while two or three may not be too many. If the vegetable bill is small in the middle of summer, it is only because various other expenses have been incurred in the cultivation of the market garden. The truth is, there is a considerable number of special expenses that must be incurred if one is to be comfortable and satisfied with rural life, and almost every one of these is absolutely unavoidable.

BUT for this increased expense there are many compensations. It is much more important to get as much wholesome enjoyment out of life than to keep expenses down to the lowest possible limit. And it is because these compensations are so many and so obvious that great crowds of city folk are annually deserting the cities with the avowed intention of never returning. It is true the price of rent and the costliness of real estate is the great moving impetus, but, after all, there is a very wide appreciation of the more healthful life, and greater personal freedom, the ample spaces and the purer air that characterize every rural spot, and which help to bring about that contentment and satisfaction for which rural life is so admirably fitted.

THE house painting season is now at its height, and all sorts of transformations are in progress everywhere. There are few matters connected with the house that call for more complete reform than this. Comparatively few persons have any realizing sense of the value of color on the exterior of a house, and many an excellent design has been ruined by improper painting and unjudicious choice in the selection of colors. Nor is the problem one that can readily be solved. The color problem of a house is an individual problem, each house calling for an individual solution in an individual way. Generalities help, in a measure, of course, but their practical utility is comparatively small. Only one general rule seems available, and that is to use as few different colors and tones as possible. Do not make your house an exhibit of the possibilities of house paint. It is a common error to introduce as many different colors as possible to emphasize every molding, to pick out every piece of detail. It is not only unnecessary to do that, but often most distressful. One must, of course, depend on one's painter to a very large extent, especially in rural communities. There one does not always find competent men trained in an artistic way; but often enough it is the only available material. It is difficult to advise further, in a general way, than to avoid indiscriminate colors and garish tones.



The Seats Overlooking the Tennis Court

Notable American Homes

By Barr Ferree

"Millbrook Farm," the Country Home of J. Franklin McFadden, Esq., Haverford, Pennsylvania



AM not sure but the term "a dear house" may be too exclusively feminine for masculine use, but no other words I know so aptly and so completely describe the charming country house "Millbrook Farm" at Haverford, Pa.

The house is not large, but mere size is the least valuable of all house characteristics, and what may be lost in this respect is compensated for many times by the very real and penetrating charm of the whole place. Very obviously it is the home of the house lover and the garden lover; for the house is a true gem of its kind, charming in a hundred delightful ways, while the gardens abound in picturesque arrangements and beautiful plantings.

Charm and restfulness, calmness and repose appear to be indissolubly attached to "Millbrook Farm." Its area is not large, for all told it includes but twenty acres, and even these are divided by the roadway by which the house is approached. But the high hedge that incloses the grounds surely shuts out care and trouble—everything, in fact, but quiet and peace; for within, the house broods quietly on a gentle knoll, all white save for its old-green blinds and brown shingled roof, and the vines that climb around its porch piers and on the rough-faced sides. An old-time house it is, quite genuinely Pennsylvania Colonial in its massing, its proportions, its detailing, its effect, albeit it was designed only six years ago by those very modern architects, Messrs. Cope & Stewardson, of Philadelphia.

There are, of course, Colonial houses and Colonial houses. Most of them are Colonial in name rather than in style or spirit; and few indeed there are that are Colonial in furnishings, and consistently so, both within and without, in so far as modern needs and modern opportunities permit. "Millbrook Farm" is one of those rare houses that can rightly be

termed truly Colonial; there is so much old furniture of the same period within it, old prints, old bric-a-brac, old articles of every sort, that hardly anything is modern in appearance save the beds, the floor coverings, the kitchen furnishings, the heating plant and the bathrooms. Even the china and glass for daily use are of the period in design though not of origin. The old Canton and Nankeen look out of their cabinets, but for practical reasons known to every housekeeper are not in daily use.

The doctors of architecture, when setting forth the various rules whereby their art is practised, put down as a cardinal principle that the designing of a house should proceed from its plan: in other words, you begin with the plan and then go on with anything else you have to do. The first step in the building, even before the designing of the house of "Millbrook Farm," was something quite different from this; it was unique, indeed, if the use of that much-used, and much mis-used, word be permitted, for a part of the interior arrangement was determined by the shape and size of the doors! That is to say, so far as the general plan could be determined by such a matter. But this was no idle fancy, for the doors in question—and they are hung at every doorway in the house—are genuine old mahogany doors! Think of that, if you will, and you will the better realize the exceeding care with which an old-time atmosphere has been given to this house.

This begins on the very threshold. The entrance porch has a bricked floor, level with the ground. But it is a true porch, embowered with roses and clematis and comfortably furnished with chairs and tables and decorated with plants. The rough white walls—the house is of stone, rough dashed and whitewashed—and the solid green shutters have a delightful old look, an impression that is heightened by the

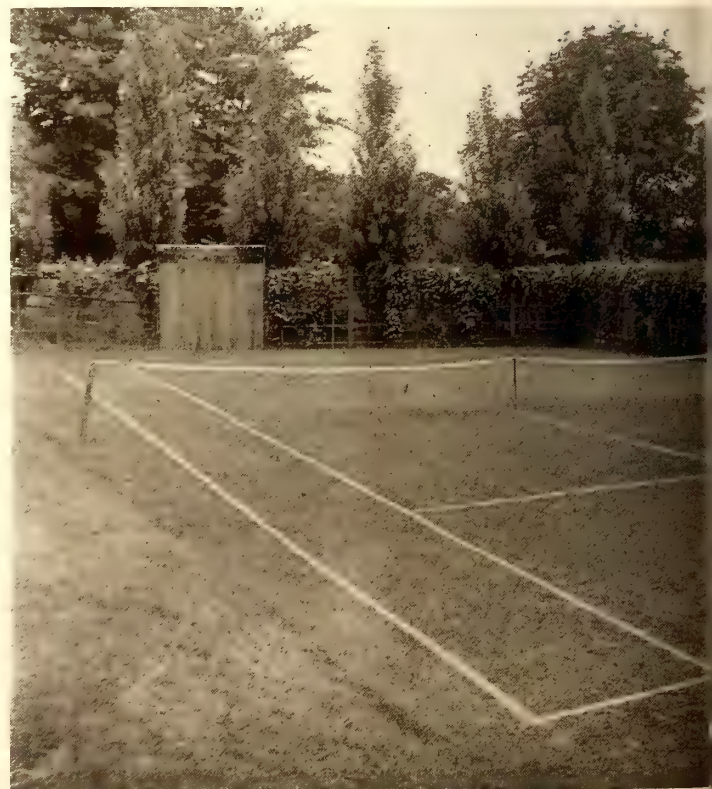


The Pool in the

The Hillside Forms a Natural Terrace for the House



The Bird Fountain in the Formal Garden



The Tennis Court

"Millbrook Farm," the Country Home of J. F.



Water Garden



The House Is a Home-like Dwelling in a Quiet Colonial Style



Court



The Giant Catalpa on the Terrace's Edge

klin McFadden, Esq., Haverford, Pennsylvania



The Hillside Forms a Natural Terrace for the House



The Pool in the Water Garden



The House Is a Home-like Dwelling in a Quiet Colonial Style



The Bird Fountain in the Formal Garden



The Tennis Court



The Giant Catalpa on the Terrace's Edge

"Millbrook Farm," the Country Home of J. Franklin McFadden, Esq., Haverford, Pennsylvania



The Library is Paneled in Stained Cypress and Has a Geometrical Ceiling



A Magnificent Piece of Tapestry Fills One Wall of the Library

entrance door, standing atop of a little flight of steps directly in the center of the porch.

And so within. In considering this house it is necessary to remember that it is in modern use. In no sense is it a museum; in no way has an effort been made to produce with painful exactitude any old-time rooms or to reproduce any too definite old-time conditions. Such an attempt could only result in dissatisfaction and discomfort, for the good people of the present day have become accustomed to many conveniences of which our very worthy ancestors knew nothing whatever. Very wisely, therefore, the impossible has not been attempted, but the rooms are filled with hosts of old things, many of which are truly fine, and all of which have interest in themselves, as mementoes of travel and search, apart from their antiquity. That the tables



The Main Hall Has Walls and Ceiling of Green, and Is Furnished with Old-time Furniture and Ornaments



The Dining-room Is Exclusively Antique in Its Furnishings

and chairs and other furniture there are chiefly old, for the modern reproductions are very few, the photographs at once display, but they also make clear that the selection of examples that approach the more modern comfort of newer furniture has not been avoided—to the greater utility of the rooms and their great comfort.

The hall is entered immediately from the entrance door, for this is a summer home—not occupied during the winter months. The walls are papered and painted a leaf green in water color. The beamed ceiling is of the same color, save for the white beams. There are green velvet curtains at the windows. Green also is the color used for the coverings of the furniture. Oriental rugs are laid on the hardwood floor.

The mantel, of wood, has brick facings with a fireplace whitewashed, like all the others in the house. The trim of the wood is painted white. Such is the setting provided for many fine old pieces of furniture and old bric-a-brac with which the room is filled. An extended catalogue would be necessary to describe them even in the briefest way. There are Chippendale chairs, old tables, a fine Chippendale secretary in one corner, an old mirror with painted top, and old paintings on glass of the seasons on one wall; on another wall is an embroidered portrait of Gen. George Washington from the Dr. Grim collection; on the mantel hangs an old flint-lock; there is a grandfather's clock, old-time mantel ornaments, antique andirons, and a multitude of curious old things of the most varied sort, each of

which makes its own contribution to the effect of the room. A doorway in the far corner admits to the library or living-room. It is a recent addition and much the largest room in the house, and is an apartment of quite generous dimensions. It is paneled throughout in cypress stained a dark brown, and has a white plaster ceiling in a geometrical pattern of curves and rectangles. The hardwood floor is covered with large Oriental rugs. On the left is a vast bay window with leaded panes—the only window in the room—filling almost the whole of the west side—the window which is such a conspicuous feature of the exterior at this point. It has a great built-in seat below the casement. The wood mantel, which is applied to the entrance wall, has facings of brick, like all the other fireplaces. Covering the opposite wall is a superb piece of Flanders tapestry. The furniture has brown

coverings, and includes, as elsewhere in the house, many interesting old pieces. There are a number of old ladderback chairs, a secretary brought from England one hundred and fifty years ago, a table with an inlaid portrait of Lafayette in the center. Among the many old ornaments in the room special mention should be made of two exceedingly rare engraved glass storm shades for candles, beautifully shaped swelled cylinders of glass delicately engraved. A small office or den opens from this room at its farthest end.

The dining-room is on the right of the hall. It is paneled in wood painted white. It has a hardwood floor with Oriental rugs. The furnishings throughout are old mahogany. The mantel, of black and gray marble, is old, and is com-

pletely furnished with old-time fixtures, including a metal plate warmer and other fire conveniences that have long since passed out of use. There is a triple painted mirror above it, and among the shelf ornaments are two great porcelain wine coolers in gold and white. The dining-room table came from a famous mansion of old Philadelphia. The Chippendale chairs have brown coverings. There is an immense mahogany sideboard, several china closets, old cabinets, a wine cellarette—near the mantel—a banjo clock, and much old dining-room bric-a-brac and old Canton and Nankeen china. At the further end is a rectangular bay window overlooking the rose garden. It has white Swiss curtains hanging over green Venetian blinds—a combination applied to the other windows. A breakfast



A Glimpse of the Rose-embowered Pergola

table stands here, with curious caned chairs over a century old. The window directly overlooks the gardens on this side of the house.

The bedrooms of the second floor are furnished with the same delightful wealth of antique furniture; only one room, however, has an old bed, a low four-poster; the other rooms have modern metal beds, a concession to modern advances entirely excusable. But the other furnishings, including the wooden mantels, are genuinely and delightfully old, of a numerousness and beauty that is positively heart-breaking.

And the gardens! There are four: the sunken garden, which one looks down upon from the porch; the rose garden, with its sun-dial, seen from the dining-room window; the trellis garden, with its three terraces, and the dahlia garden, with the tennis court, representing several years' additions. Every

year or two a new bit of land has been brought under floral cultivation, until now the gardens of "Millbrook Farm" cover a considerable extent and are veritable bowers of beauty. The ground slopes down somewhat from the site chosen for them toward the creek which runs through the place, so that a terrace effect is obtained quite naturally.

Just below the house, and growing out of the side of the first terrace, is an immense catalpa tree, a splendid specimen rarely seen of this size. It frames with its branches the sunken garden from this end of the porch and shelters a vine-covered house, once ignominiously put to the utilitarian purpose of storing ice—in plain words, an ice-house—but now transformed into a summer house, with an open end and side forming a porch, the roof thickly vine laden with roses, honeysuckle and clematis, and the whole surrounded by a hedge. Beyond is the sunken garden in a panel design, hedge-inclosed and filled with many hardy flowers growing in rich profusion. In the grassed center is a capacious bird fountain—brought from Italy—and an ivy covered sun-dial. Above and before this garden is reached is the rose garden, immediately below the dining-room window. And quite in the hollow, at the base of the hillside across the stream, is the water garden, with a wealth of lilies and other water plants thriving in its placid waters, and almost surrounded by a hedge of Michaelmas daisies in late summer. Nor does this exhaust the loveliness of the grounds.

And then, beyond, moving in the direction of the back of the house, is the pergola, leading through the trellis garden by the Venetian well head to the dahlia garden and tennis court, so arranged as to seem quite endless in its vine-covered perspective. It is lusciously overgrown with climbing roses of many varieties and wistaria and clematis—a wonderful combination of beautiful flowers and sweet odors that succeed each other so closely that scarce a month is without its fragrant bloom. And on either side are little bosquets, each hedge-inclosed, each with its distinctive flower and a pot or

jar to give special emphasis—a lovely, delicious place, full of beautiful garden growth and color, full of surprises, full of charm and beauty.

Presently one emerges upon the dahlia garden and tennis court, very spacious, and, like all other parts of these fine grounds, inclosed within its own hedge. A brick-paved, walled inclosure on one side serves as a resting-place for the spectators. On the ground above and behind it is the dahlia garden, where the many plants are carefully cut back to insure late blooming when most of the earlier flowers have contributed their quota to the loveliness of the grounds and finished their yearly growth. It is closed by a row of lusty poplars, through whose leaves can be distinguished the outlines of the carriage house and stable.

There is still much to see on the other side of the house—in the land on the left of the entrance drive. First one enters the orchard, and then beyond are the house farm and kitchen garden. The vegetable garden is inclosed within a thick hedge. Down its center runs a path with rose-covered arches and widely bordered on either side with gaily flowering annuals and perennials, a brilliant color note in what otherwise would be the somber growing of vegetables. They quite transform this utilitarian spot and give it real life and beauty.

One other feature calls for mention, and that a most curious and interesting one. In the flower garden on the right are several flights of steps made of old street-crossing stones from Philadelphia. Are these stones really older than other stones? I do not venture the suggestion; but, of course, their worn surfaces have a quality and texture that no other stones would give. This was the real reason—and a very good reason—for their use; but at the same time I can not help feeling that this utilization of these much-used stones conceals an affection for the good old city of Philadelphia which the true Philadelphian never forgets, and the loss of which in those who have wandered elsewhere, is to him the greatest of human failings.

Heating the House



ACENTRAL heating plant is the only effective and satisfactory way of heating a house in a cold climate. It consumes less fuel in proportion to the results obtained; its operation is more uniform and equitable than in the separate fire system, and it is easier and cleaner to operate. The cost of

installation is apt to be considerable, and this is particularly so when a central plant is installed in an old house, entailing the taking up of floors and the building of flues. The better service in the end, however, will generally be found ample compensation for any expense incurred for installation.

The warm-air furnace is the simplest general heating apparatus and the one most in use, although not regarded as the best for large houses. The size must be proportioned to the space to be warmed; the parts and joints must be gas-tight; the furnace air must be obtained from without and from above ground by means of a clean cold-air box, protected against vermin and readily cleaned; the air should not be overheated; the furnace should occupy as central a position as possible in order that the various pipes be of relatively the same length, but may be placed somewhat toward the cold side of the cellar. Furnaces are portable, that is, made with galvanized iron coverings, or contained within brick settings. The former type has almost completely superseded the latter. Twin furnaces, which are two single furnaces coupled, are sometimes used for large houses. Local conditions will govern their employment instead of two separate furnaces.

Hot-water heating apparatus is used in two systems, low

pressure and high pressure. Small pipes are used for the latter; large ones for the former. The hot water is generated in a boiler and is conveyed in the main pipe to the highest point of the system; several feet above this it is connected with an expansion tank, which acts as a safety valve. Feed pipes connect the main pipe with the radiators, and a return pipe brings the cold water back to the furnace. In the high pressure system the expansion tank is closed and the apparatus works under more or less pressure.

Steam heating is very similar to hot-water heating in results, and the apparatus for both systems, while distinctively different, are not dissimilar in a certain general way. Several forms of steam heating have been devised and are in use. Steam gives a greater intensity of heat than water, but the pipes must be stronger and able to withstand pressure.

Steam for heating purposes is used in both the high and the low pressure system, but the former is more adapted to large buildings, and requires the attendance of an expert engineer. Domestic heating by steam is chiefly by the low pressure system. Another classification is based on the piping. The two-pipe system is most commonly used, and is identical with that for hot-water heating. A partial circuit system is also much used in private houses. The main flow pipe is carried to the highest part of the basement, with distributing pipes running at slight inclines, finally connecting with the boiler below the water line. The radiators are connected with risers containing flow and return from and to the distributing pipes. A third system is the one-pipe system, sometimes called the complete circuit system, in which one pipe answers for the steam supply and the water return.

Gardening Without Soil

By S. Leonard Bastin



HERE is perhaps no more pathetic situation than that in which a person fond of plants, and all that appertains to their culture, is forced by circumstances to pass most of the time indoors. Kind friends may bring posies of flowers, which enliven the aspect of rooms with their gay coloring, but these can never entirely satisfy the longings of the gardener. Three parts of the joy of the plant grower consists in the tending of his treasures, the watching of their development, day by day, and the anticipation of their perfection. But even for those who can not manage an ordinary garden, it may be suggested that Nature, the giver of all things, has made provision. At any rate, she has produced a number of plants which, unlike the greater part of vegetation in the world, do not depend for their existence upon their attach-

the commercial vanilla is obtained. This plant may only be grown with perfect success in a warm and damp greenhouse, in which it may be trained on a wire along the roof of the building. Another orchid which, on account of its curious habit of growth, has been called the "upside-down plant," requires a very little soil. Strangely enough, however this species is placed it always spreads downward.

Another highly interesting genus of air-rooted plants is that called *Tillandsia*, two species of which we are able to figure. Natives of Central America, these plants do not require even the small amount of soil which some orchids seem to like. A glance at the accompanying photograph depicting a specimen of one of these remarkable plants will show that it is merely suspended by a piece of wire. Another species of *Tillandsia*, commonly referred to as old man's beard, is even more strange, in that the whole plant has been reduced to a mass of hair-like filaments. This quaint plant is quite a serious pest in Mexico, where it is said to overwhelm trees with its growth. Most of the species of *Tillandsia* may be grown in an ordinary room, although it is likely that the air of the apartment would be found to be too dry, and the following method should be adopted: *Tillandsias*, in common with many delicate species, will be found to flourish well under the shelter of a glass shade.



Most Plants Grown Without Soil do Best Under a Glass Shade

ment to the ground. With a collection of these, and the exercise of a little ingenuity in the cultivation of some other plants, it is possible to form a veritable garden without soil. The care of such a garden entails no labor beyond that involved in the occasional application of water. In almost any room which is fairly well lighted and of moderate warmth it should be possible to maintain such a collection in health. It is a good plan to contrive a few shelves, in a well illuminated position, on which the plants may be disposed according to the fancy of the gardener. Another way, and perhaps one which will appeal to most folk, is to obtain a bamboo stand, such as is shown in an accompanying illustration.

The early explorers in the jungle land of the tropics were very much puzzled by the epiphytic plants which abound in the humid forests. They could not understand how it was that these species existed at all, for it was obvious that, perched upon the bough of some tree, they could not derive any benefit from the soil. As a matter of fact there are not a few plants which grow simply in the air, imbibing all the moisture which they require from the atmosphere. A very large number of orchids are possessors of aerial roots, and one of the most interesting of these is the plant from which



The Rose of Jericho Opens Out Into a Fine Green Plant After Immersion

The reason for this is, of course, due to the fact that the protection prevents a too free evaporation of moisture. The owner of a garden without soil would do well to procure a number of shades varying in size.

There are few more grateful sights to the eye than the fresh green of young plants. A great many seeds will germinate very readily if kept warm and moist, and the plantlets will give a most attractive appearance. Many varieties, such as cress and linseed, can be grown very readily, and these do not require any soil. The best way, perhaps, is to sow the seed upon a piece of flannel. When the seed is scattered over the cloth it should be well sprinkled with water, and during the whole course of treatment it must never be

allowed to become dry. The rapidity with which the seed will grow is often amazing, and even in the short space of four days the plantlets will have burst through their prisons and be shooting up to the light. In the case of all these seedlings the use of a glass shade will be found very much to lengthen the life of the plants, and by its help linseed may even be induced to flower, adding greatly to its beauty.

The quaint clay shapes which were introduced a few years ago are so striking that most people must now be familiar with them. One or two of these curiosities should certainly find a place in the garden without soil. The best kind of seed to use is that of a fine grass—packets of this are usually supplied with the clay head. Notwithstanding, any kind of seed almost will germinate, and the head under the glass shade in the picture is covered with a kind of cress. The manner of sowing is simple enough, and consists in taking a small quantity in a spoon and sprinkling it over the grooved parts of the shape. Then fill the receptacle with water through the hole which is provided at the top. If you desire that the seed should germinate very rapidly, it is a good plan to place the shapes in a dark cupboard for a while, and then as soon as a start has been made remove out into the full light. The grass-covered shapes will remain in perfection much longer if kept under the shelter of the glass shade.

Some of the most curious species in the world are those which popular imagination has called resurrection plants. These strange vegetables, which abound in some of the arid regions, notably on the shores of the Dead Sea and in Mexico, are most remarkable in their habits. During the long dry spells, which are a feature of the climate, these

plants curl up into balls, to all appearances being quite dead. But as soon as the rain comes they unroll and develop a beautiful green growth. As may be imagined, such plants are just the right kind for including in the soilless garden. Several species are now quite easily obtained, one of the most commonly seen being called the rose of Jericho, a desert species. The culture of these resurrection plants is very simple,

and consists in alternately inducing and discouraging growth. As purchased, the specimens will be quite dry, but a short immersion in water will revive the plants. From thenceforward they should be kept in a moist state for a period, but as soon as the plants begin to lose the bright green tint it is desirable that they should be dried off and allowed to rest. In these circumstances it is well to own a small collection of the strange plants, so that one may be able to have a succession of specimens in their full beauty. If the plants do not grow very readily after immersion, it is a sign that they need a longer period of quiescence, and they should be at once dried off again.

It is certain that no soilless garden would be complete without one or two examples of the cleverly trained Japanese fern *Davallia*, an instance of which may be seen in the picture of the collection. As is well known, these have been designed in several ways, the rhizomes of this accommodating species having been twisted to resemble such widely di-

verse objects as monkeys and Chinese junks. But the most satisfactory shape from the gardener's point of view is the simple ball. By means of a piece of wire fixed to the frame upon which the fern is trained, these objects may be suspended from a shelf, and when in full growth are most beautiful in appearance. During the fine warm weather every



The Care of the Soilless Garden Entails no Labor
Beyond the Application of Water



A Bamboo Stand Is Useful for the
Garden Without Soil



Old Man's Beard, a Tillandsia
from Mexico



This Tillandsia Grows Suspended from a
Piece of Wire

inducement should be given to the fern ball to grow. The whole thing must be steeped in water once in twenty-four hours, while whenever it is deemed to be necessary the shooting rhizomes should be syringed. Toward the fall a decided slackening in the vigor of growth will be apparent in the fern ball, and then is the time to start the gradual drying off. It is unwise, and may indeed be fatal to the plant, to cut off the supply of water altogether on one day. Spread the process over a fortnight, giving a less amount of water each time, until the sprinklings are stopped altogether. All the winter the fern ball must be kept in a dry even temperature, and with the return of spring it should start as freely as ever.

Not a few plants will grow in water alone. Of course, the culture of hyacinths bulbs in glasses is too well known to warrant any lengthy description, although it may be useful to mention that where so many people fail in the growing of these bulbs is due to the fact that they will stand them in a light position at first. For at least ten weeks after planting the bulbs should be kept in a dark, dry cupboard until they have rooted well. Then they may be brought out into the light, when they will speedily start a healthy top growth. Hyacinths are not alone as bulbs which may be cultivated in a vase, another excellent subject succeeding under the same treatment being the narcissus, known as the Chinese joss lily. Acorns make interesting specimens for growing in small vases, filled with water, and will make fine little oak trees. The succulent plant commonly known as the house leek, of which an illustration is given, will flourish well for a long time in plain water. The chief point to bear in mind in the culture of all these plants is that it is most important that the water should be kept perfectly sweet and wholesome. To this end it is a good plan to place a small lump of charcoal in each vase. In all cases it is well to use spring water if possible, though if this is out of the question there will be no harm in resorting to the tap.

Among the foregoing specimens for our garden without soil water has played a prominent part in the



The Common House Leek
Flourishes Well in a
Vase of Water

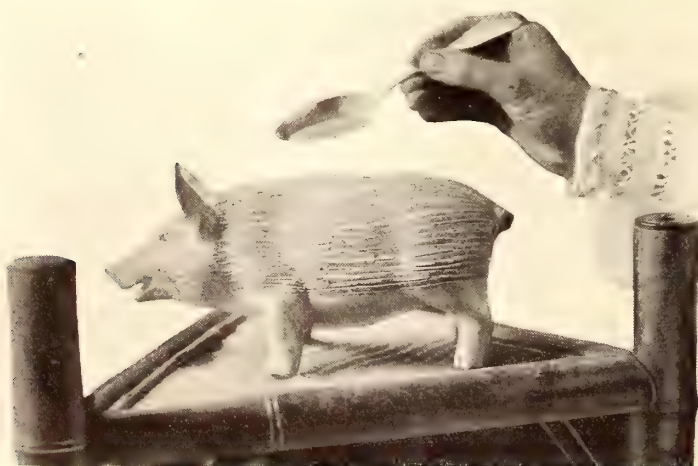
culture of the plants. But in the case of the Monarch of the East, a strange species nearly related to the arums, even moisture can be dispensed with, at any rate during flowering time. It is a fact that this plant, bulbs of which are to be obtained at any florist's store, will display its fine blossoms without having been supplied with any water at all. Place one of the roots upon an ordinary mantelshelf during the autumn, and go away and forget all about it. Toward the spring it will be noticed that a shoot is being sent up from the center of the bulb, and this goes on developing day by day until a splendid flower, glowing with crimson and yellow, is produced. After blooming time, if the Monarch of the East is wanted for another year, it is necessary to plant the bulb out in soil in a pot or the open border. Now it is that the strange plant desires water, and plenty of it. With extraordinary rapidity a giant leaf is sent up, and all this time liberal supplies of moisture should be given. At the end of the summer the bulb must be dried off and set aside for its flowering, which achievement, as has been seen, is accomplished on the water stored during the growing period.

It will be gathered from this outline of the specimens most suited to the garden without soil that the management of the collection is a very simple affair. Given a good light situation and even temperature, all should go well with the plants under very ordinary treatment. Perhaps the greatest enemy, especially should the garden be placed in a living-room, is dust. All the plants must be kept scrupulously clean, any specks of dirt being washed away with a soft sponge. It must be borne in mind that artificial light is rather harmful to plant life, and some means of shading the specimens should be adopted when lighting-up time comes.

Yet so very little care is required in the soilless garden, comparable with the vigorous labor needed for the garden in the outdoor or indoor earth, that the very utmost one has to do hardly counts at all as labor, and is merely a pleasure. It is, of course, an indoor garden, but there is much variety in it and much pleasure.



The Clay Head Keeps Longer in Perfection
Under a Glass Shade



A Spoon Simplifies Sowing the Clay Shapes with Seed



The Vanilla Orchid Trained Along the Roof of a Warm Greenhouse

Historic Mansions of the James River

II.—“Shirley,” the Ancestral Home of the Carters

By Francis Durando Nichols



ON THE northern bank of the James River, just as it widens and broadens in its descent from Richmond, lies “Shirley,” the homestead of the old Virginia family of Carters, one of the most interesting of the Colonial homes in this region, and one of the oldest properties now occupied by the descendants of the original families in this country.

The Mansion House of “Shirley” was built by Col. Edward Hill, who died in 1700, and is buried in the family burial ground, which is under a grove of tulip poplars beyond the garden and to the east of the mansion. His daughter Elizabeth married, in 1723, John Carter, of “Corotoman,” the eldest son of “King Carter.” She brought “Shirley” into the possession of the Carter family as the heiress of her brother Edward Hill. John Carter was educated in England and studied law at the Inner Temple. He was appointed, in 1722, Secretary of Virginia. His widow, a celebrated beauty of her time, later became the wife of Bowler Cocke, who after his wife’s death held by courtesy the estate until 1771, when it became the property of Secretary Carter’s eldest son, Charles Carter, who was the first of the Carter family to occupy “Shirley.” The latter’s sister Elizabeth became the wife of Col. William Byrd, of “Westover.” Charles Carter was born in 1732, and in 1752 he attended William and Mary College at Williamsburg. He was burgess from Lancaster County, from 1758 to 1775, was a member of the conventions of Virginia during the

Revolutionary period, and first State council in 1776. He was on intimate terms with George Washington, with whom he visited and corresponded. He married first his cousin, Mary W., a daughter of Charles Carter, of “Cleve,” and second, Ann Butler, daughter of Bernard Moore, of Chelsea, King William County, and granddaughter of Governor Spotswood. Their daughter Anne married Gen. Henry Lee, of Stratford, Va., who later became the parents of Gen. Robert E. Lee.

Charles Carter was noted for his kindness and generosity, and the hospitalities he extended to the first families of Virginia during his mastership of “Shirley” were distinctive in their elegance and magnificence. He died in 1806, and the estate passed into the hands of Dr. Robert Carter, who was born in 1774, and married Mary, daughter of Gen. Thomas Nelson, of Yorktown. From him it descended to his eldest son, Hill Carter, who was born in 1796, was an officer of the United States Navy in 1812, and married Mary Braxton, daughter of Col. Robert Randolph. Upon the decease of Hill Carter the estate became the property of his son, Robert Randolph Carter, a lieutenant in the United States Army, who was the fifth Carter owner of “Shirley.” He married Louise Humphreys. The present owner, Mrs. Alice Carter Bransford, is a daughter of Robert and Louise Carter, being the sixth owner in a direct line from the first Carter of “Shirley.”

When Charles Carter, grandson of Robert Carter, known as “King Carter,” married, in 1770, Ann Butler Moore, and took his bride to “Shirley,” he made extensive alterations,



The Side Porch



A Garden Walk

including the raising of the roof, which was one of the familiar hipped style, to the mansard roof, pierced by rows of dormer windows, which it now has; the addition of the two-story porches at the two fronts of the mansion, and the removal of the partition which originally formed a narrow hall extending through the depth of the house; the latter alteration permitting of the extra space being thrown into the dining-room on the river side. It is supposed that he also added the handsome paneled walls and cornices throughout the interior, for strangely enough when the present owner removed some of the paneled wainscoting for the purpose of installing a water supply she found very fine hand-finished walls, which would indicate that the paneled walls were a later feature added to ornament the interior when Charles Carter took possession of "Shirley."

The mansion is a square red brick structure, standing some two hundred yards from the James River, and is well sur-



"Shirley" Annex, Containing Household Offices and Servants' Quarters

rounded by many beautiful trees, which present a forest effect when seen from the steamer passing up the river. The brick of which it is built is laid in Flemish bond, harmonizing with the white-painted trim and green-painted blinds. The side porch, with its pedimental roof and columns, is an interesting feature of the house, while the porches and verandas, which are on either end, are of later date than the original steps erected at the time the house was built. Ascending the dressed stone steps and crossing the flagstone porch,

one enters the great square hall with its paneled walls; in fact, the interior throughout has paneled walls with heavily molded dentalled cornices treated with an ivory-white paint, which has grown old with age, and is now rich in its antiquity. This hall contains an open staircase of unusual beauty, displaying the broad character of the early Colonial builders. The old desk now here, and used for a post office, formerly belonged to Charles Carter. There is also



The Mansion Is a Square Red Brick Structure with a Mansard Roof Surmounted by a Pineapple, the Emblem of Hospitality.

in the hall a fine old paneled mantel rising up to the ceiling. Ancestral portraits grace the walls of the great hall, in which are included those of Robert called "King" Carter and Judith Armistead, his first wife, both being notable portraits.

To the right of the entrance is the morning-room, in which there is a fine old mantel. The drawing-room, on the river side of the house, is oblong in its form. The entrance to it from the hall is marked by a very handsome double transom, while the doorway leading into the dining-room has a heavy molded casing surmounted by a carved pediment of unusual beauty and surrounding a door of mahogany. On the walls of the drawing-room are more ancestral portraits, including a portrait of Charles Carter and one of

his second wife, Ann Butler Moore. Other portraits are John Carter and his wife Elizabeth Hill; Edward Hill, the builder of the house, and his wife; Mrs. Williams, a Welsh lady, and three portraits by St. Memin of Williams and Robert Carter, and Mary Nelson, the latter's wife.

The fireplace is of great beauty, with its fine carvings and

the drawing-room, adjoins the latter, and thus fills out the river front of the house. It is a handsome room with paneled walls and heavily molded cornices. The dining-table, of mahogany, is antique and good in its design, and the side-board, of the Empire period, is also an antique. The old Carter silver, marked with the Carter crest, some of which is shown on the table and sideboard, is still preserved by the present owners of "Shirley," as well as much more which is now on exhibition at the Jamestown Exposition. The crowning glory of the room, however, is the portrait of Gen. George Washington, painted by Charles Willson Peale.

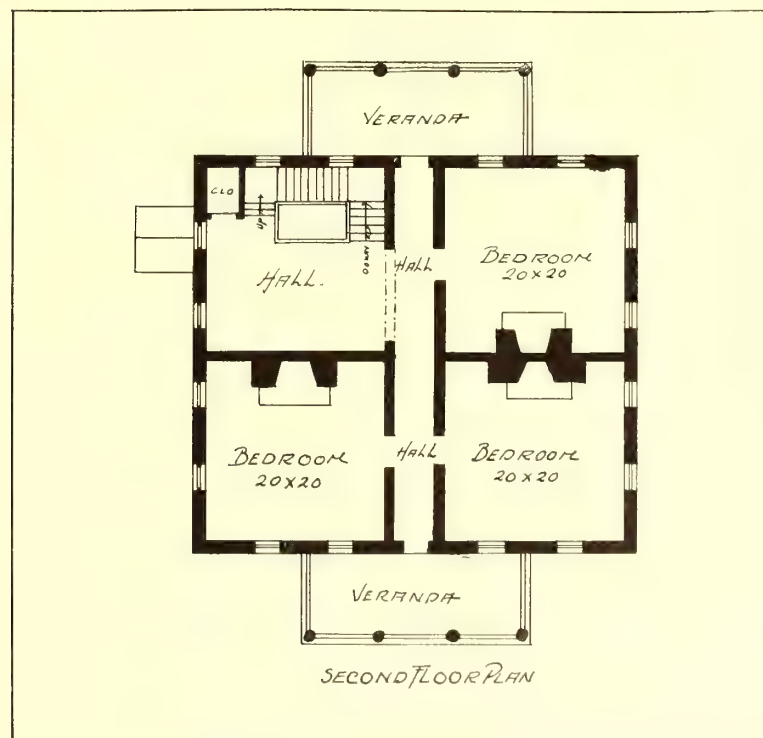
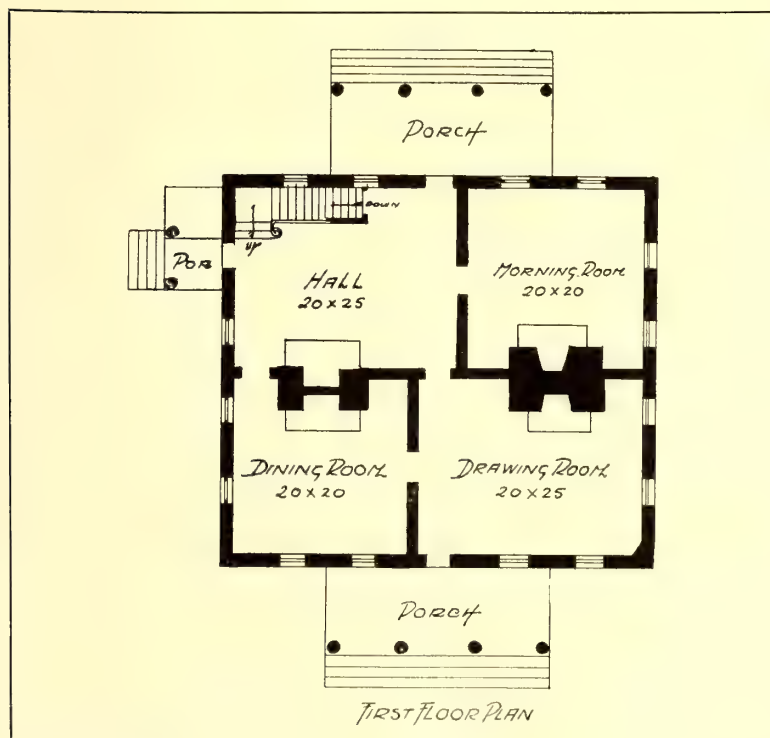
The second story of the house contains a large open hall extending the

entire depth of the building and opening into the verandas built at either end. Three large bedrooms open from this hall, while the third floor contains an equal number of sleeping-rooms.

Across the bowling green in front of the house are two brick buildings, one containing the kitchen and dairy, both



Family Portraits in the Main Hall



a paneled over-mantel with finely carved border. There are some fine old pieces of furniture placed about the room which were formerly owned by the founders of "Shirley," but most of the furnishings are of a later period.

The dining-room, which is entered from both the hall and

of which have stone slab floors. The dairy has marble troughs, through which the cool spring water continually flows, while the other building contains the servants' quarters. Dividing these structures is a high fence and hedge, beyond which are the farm buildings.



The Wood Work in the Drawing-room Is of Special Interest. Three Family Portraits by St. Memin Hang Over the Fireplace



The Dining-room, which Is Filled with Historic Portraits, Has White Paneling which Extends to the Ceiling

To the south of the mansion is the garden, the entrance to which is through a quaint old gateway.

It is laid out with walks extending in both directions and bordered by a box hedge. This garden was laid out by Mary, wife of Hill Carter, and contained almost every kind of growing plant and shrub, the whole of which is now inclosed by a high box hedge.

"Shirley" stands as a noble monument to its builder and founders, and the hospitality which was extended in the good old Colonial days of the Old Dominion is still maintained by the present owners, who have naturally inherited this characteristic from their distinguished ancestors.

Indeed, who could not but be hospitable amid such surroundings and such memories? The association of hospitality with the dwelling is nowhere more finely nor more completely illustrated than on the James River, and in the very houses which are now being passed in review. The natural inborn courtesies of the owners, past and present,

have dowered these superb old mansions with a tradition for hospitality almost without a peer among the great houses of America.

Nor is their continuous ownership and occupancy by a single family, or members or branches of a single family, without important value. The modern house is built for modern use, and many a great new structure has passed out of the possession of its builder's family within a few years after it has been completed. But the old builders of the

James River built for longer years than their own, built charmingly and well, so that their children and children's children loved the old places, lived in them and cared for them.

The survival of these mansions is, therefore, a significant fact, possessing a sociological as well as an architectural or esthetic value. It means a new idea of home, or rather the old idea, exemplified, magnified and illustrated in the finest possible way.



The Famous Staircase in the Lower Hall



Main Entrance to "Shirley"



Doorway in the Drawing-room

Stenciling the Apple

By Adrian Weimas



IT IS no matter for surprise that the curious method of apple stenciling which was introduced a few years ago should have created quite a furore in certain circles. The fruit, which in these original instances bore the imprint of some celebrity, fetched a price which must stand as the highest ever obtained for the homely apple. It is on record that half a dozen of them realized a sum of no less than twenty-five dollars. Even nowadays stenciled fruit commands an enhanced price, and the demand seems to be always in advance of the supply.

The enthusiastic gardener will not be content to leave the art of apple stenciling entirely in the hands of the professional grower. He would be less than human did he not wish to try his hand at the process himself. Providing that he has within his domain an apple tree of the right kind in a state of healthy activity, there is really nothing to prevent him indulging his fancy to the full. Of course, after all, the printing of designs upon fruit is only a kind of photography, and its possibilities are quite unlimited. For this reason the chief interest in apple stenciling lies in doing it for oneself, as it is much more exciting to have portraits of one's own family upon the fruit than pictures of some great public men, no matter how popular they may be.

As in the old-fashioned recipe for the cooking of a hare, it was necessary first to catch the animal; so if we would imprint portraits upon apples steps must be taken to obtain the fruit. A very large number of varieties of apples commonly found growing in gardens will answer the purpose. It goes without saying that the kind should be a good eating sort, and within reason the larger the fruit is so much the better. It is also desirable that when ripe the apple should take on a fine red tint upon the side which is exposed to the sun; and it will be even better if the fruit should have a glossy skin, which is free from the roughness present in many varieties. But apart from these few points there is no need to be particular as to the kind of apple selected.

As soon as the fruit has attained to a fair size it will be time to set about preparing it for the treatment. If any choice is possible a tree should be selected which is in a fairly open situation. Only the apples which are perfect and well formed should be chosen for the purpose of stenciling, and it is desirable to pick out those which are somewhat isolated. In this position they will be likely to get a more generous supply of sap than if they were in clusters, and all this means better specimens later on. Now secure a number of paper bags sufficiently large to inclose the apples when they



The Green Apples Tied in Bags
Before Stenciling

attain to their full size. Each apple which has been marked down as a good subject must now be inclosed in a bag, the opening of which is firmly drawn together with string around the stalk of the fruit. In view of the fact that the practise of apple stenciling is invariably accompanied by a certain number of failures, it is as well to tie up a larger number of specimens than those which it is thought would meet all requirements.

Then set about the preparation of the stencils. These should be formed out of thin paper, the material having enough substance, however, to prevent its being easily torn. As it is desirable that the stencils should be able to stand an amount of moisture perhaps the best kind of paper to use for the purpose is the ordinary tracing paper, which is, in a measure, waterproof. Anyone with the ability to make a rough sketch will find little difficulty in scheming out the portrait of some individual, drawing the outline firmly, and in the interior only putting the most prominent features. Now cut out the head, which, of course, must not be larger than will easily go

upon the side of the apple, taking care to get the border nicely sharp. There is nothing better than a keen knife for the purpose, the paper being held out flat on a smooth piece of wood. The chief characteristics of the visage which have been drawn in must be cut right clear, so that when the design is held up the eyes, nose and mouth let the light through.

Those people who do not feel that they could secure a good enough likeness in a freehand sketch as described above have no need to regard apple stenciling as beyond their reach. Generally speaking, much better designs may be obtained by tracing the portrait from some picture or photograph. With the thin paper used this is a very simple affair. Then when

the design is penciled in it is only necessary to cut it out as described above. As each stencil is finished it should be placed carefully aside. Again remember that in view of possible failures it is well to allow a margin in the number of stencils prepared. When all are completed they should be put into some place where they will keep perfectly flat, as between the pages of a book which is not likely to be used for a while.

As has already been mentioned, there is, of course, no limit to the variety of designs which might be stenciled on to apples. To the beginner it may be suggested that he should at first confine his efforts to patterns of a simple nature. These can be made in very striking style even by an unskilled hand. Ordinary portraits, simple figures, coats of arms, symbolical designs—there is an endless range which even the experimenter may attempt with hope of meeting with suc-



A Desert of Pictorial Fruit



Affixing the Stencil to the Apple

cess. With practise much more elaborate pictures may be undertaken, and these, if well done, are exceedingly striking. A skilful professional has recently produced some examples of high artistic merit. These have embraced quite delightful country scenes, views of houses, ships, all delineated with a clearness that is amazing.

On a fine day when the apples on which it is proposed to put stencils have attained to their full size, as far as actual development is concerned, the paper bags may be removed. This must be accomplished with a great deal of care, as on no account should the fruit be roughly handled or it will resent the treatment in the form of ugly brown patches. If all has gone well the apples will be of a clear green color, very much lighter in fact than they would have been if they had been exposed to the light. Any specimen with a blemish or one which has not grown properly should, of course, be discarded. All is now ready for placing the stencils into position. Many kinds of adhesives have been used for affixing the



Making the Stencil



Removing the Stencil—the Finished Portrait

of circumstance that some of the stencils should be loosened by rain after they have been on some time. Then, indeed, it is well nigh useless to attempt anything in the way of a replacing. It would be nearly as difficult a matter as is the resetting of a photographic print in a frame which has allowed the paper to slip. The result would be almost certainly more or less of a failure.

But if all is well and the garden has had a full share of sunshine the stencils on the apples should be ready for removing in a few weeks. By their general appearance it will be seen that the apples are in a ripe condition, and each one may be then carefully gathered. With a basin of warm water and a soft cloth, the surface of the fruit is quickly relieved of any portion of paper which seems inclined to adhere. Then the object of the whole business is made clear. The closed-in portions of the stencil stand up in clear yellow against the bright crimson of the side of the apple, and the principal points of the design are strongly marked out in red. The apples may now be stored away for use as required.

Apples are not alone among fruit which may be treated in this manner. Some success in this direction has also been achieved in the case of peaches. It will be found, however, that the rough skin of this fruit is less easy to deal with as regards the fastening of the stencil, and the design when printed does not stand out with the sharpness shown in apples.

The Nineteenth Century Bedroom

By Esther Singleton



IN comparison with former centuries, the nineteenth century was somewhat barren in distinctive styles. Its dawn found Sheraton furniture in high favor; and in fashionable houses this style was very soon supplanted by the Empire. The designs of Percier and Fontaine, in France, and the works of Thomas Hope, in England, quickly familiarized the buying public with the latest adaptations of Greek and Roman decoration. The fashion plates of the period show that the Empire style lasted, with modifications, far into the century. Its forms, on the whole, grew heavier and clumsier, and the applied ornaments in gilt and bronze were dropped, till nothing but ugliness remained.

Heavy mahogany beds of tomb-like proportions, massive wardrobes, big box-like washhand stands of the same wood, and solid chairs, with an occasional rocker, furnished the average bedroom. This was supplemented by a big cheval glass and a dressing-table which was adorned with the old eighteenth century toilet. The floor was covered with a hideous Brussels, Axminster or Kidderminster carpet, and the windows were curtained.

Side by side with the Empire style a spurious Gothic was trying to make itself felt, as may be seen in the fashion plates of the day. This, however, was affected only by the wealthy, on account of the cost of the carved work. Down to 1860 a bedroom of the upper middle class in England and America presented an odd mixture of styles. Many men



1—Heppelwhite Bed; Chairs Reminiscent of Sheraton; Nondescript Table

still living remember in their childhood to have slept with a brother in a trundle-bed, pulled out at night from under an old curtained four-poster. The fourpostered bedstead, with carved or turned posts, or "sweep top," is still to be found in many houses.

The nineteenth century bedroom, before the general use of iron or brass bedsteads, contained articles of several styles, such as Heppelwhite, Sheraton and Empire, side by side. In fact, at the present day the same thing may be seen. A glance at the accompanying illustrations will show this.

The heavy mahogany furniture in use in the early part of the century is well exemplified in the illustrations Nos. 2 and 3. Even in these rooms, however, we notice simple forms of the Windsor chair, which date back to the early years of the preceding century, and have persisted to the present day in kitchens. The Windsor rocker may also be seen in No. 5, which contains a good example of the nineteenth century toilet-table. In this room also may be seen a couple of chairs in the Sheraton style and a Heppelwhite bed, showing his characteristic "sweep top." Heppelwhite, however, would have put his drapery over the "sweeps" instead of under, as here arranged.

Another form of Heppelwhite bed appears in No. 1, where the chairs are reminiscent of Sheraton and the table is nondescript. The heavily upholstered "wing-chair," which we find in bedrooms in thousands of inventories through the eighteenth and nineteenth centuries, ap-



2—The Heavy Mahogany Furniture of the Early Part of the Century



3—A Modern Bedroom Furnished with Old-time Mahogany Furniture

pears in No. 4, which plate also contains a rush-bottom chair of the form very popular from 1700 to 1750.

It must be remembered that steam-heated rooms were not known to the community as a whole during the greater part of the nineteenth century. People, as a rule, slept in cold rooms, or in rooms heated by an open fire. The curtained bed, therefore, had a function as well as being merely a decorative feature of the room. At night the occupant frequently wore a nightcap and drew the curtains closely around him to shield himself from draughts. The modern taste for cold fresh air has, in a way, revived the need of curtained beds, and many a modern room now contains copies of old styles of furniture and upholstery.

A reference to manufacturers' lists will show that iron and brass bedsteads were not advertised for sale till about 1860. By this time the wooden canopied bedstead, called the "half-tester," had generally supplanted the four-poster. The "French bedstead" was also popular. The latter appears in Nos. 2, 3 and 6. The head and footpiece were alike in size and shape, and over it two curtains fell, sometimes from a pole fixed at the side, and sometimes from a small circular canopy attached to the ceiling. The iron bedsteads were made in all forms, the "half-tester" being a particularly popular one. The curtains of flowered chintz or bright cretonne, matching or contrasting with the light wall paper and window curtains, gave the room that brightness which is always desirable in a sleeping apartment. Dark tints were, as they should be, confined to the downstairs rooms.

In recent years there has been a decided return to old fashions. The bedroom carpet has been banished, the floor being polished and decorated with two or three rugs of Oriental pattern. The old custom of being satisfied with a rug beside the bed to step out on, another before the dressing-table, and a third before the washstand, affords all the necessary comfort, and is found to be far more decorative than a uni-

form ground of sprawling patterns. Examples of this are seen in Nos. 2, 3 and 5.

From about 1860 to the last decade there was a taste for "sets," comprising a bedstead without drapery, a dressing-table with rows of drawers at each side of the long glass, a washhand-stand, several chairs and an oval table with marble top. These sets were made of walnut, cherry, maple, etc., and cheap wood painted in light colors decorated with flowers and known as "cottage furniture" was also popular. These almost drove out the mahogany, and indeed much of it—heavy, clumsy, unpleasing in form and devoid of carving or any ornamentation to brighten it—deserved to go.

People of simple means frequently furnish their rooms with reproductions of particular styles they favor; thus, No. 7 shows a room decorated and furnished in Louis Quinze style.

Turning now to the actual contents of rooms during the nineteenth century, let us look at one or two records. Mr. Derby, a wealthy resident of Salem, died in 1805. His "Southeast Chamber" has a Brussels carpet on the floor, and the open fireplace is furnished with brass andirons, bellows and steel shovel, tongs and fender. The bed is a four-poster with green curtains (worth \$133), and there are two green chairs, eight mahogany chairs with silk bottoms, an easy chair, a rich looking-glass, a chest-upon-chest of drawers, a stand-table, two flower-pots and two crickets, or stools. The "Northwest Chamber" is also covered with a Brussels carpet; white cotton curtains hang at the windows and probably drape the four-post mahogany bed (worth \$130). The other furniture consists of mahogany chairs, an easy chair, a dressing-glass, a looking-glass, a mahogany commode, a washhand-stand and basin, five pictures, three white china flower-pots and brass hearth furniture. These Salem rooms differ very little from the bedrooms of "Mount Vernon," the "Front Room" of which



4—The "Wing Chair" of the XVIII and XIX Centuries, and the Rush-bottom Chair of 1700-1750 Are Still Prized in Modern Rooms

contained a carpet, window curtains and open fire, a high-post bedstead and curtains, dressing-table, large looking-glass, wash-basin and jug, six mahogany chairs and pictures on the wall. Mrs. Washington's room had a bedstead with curtains, a dressing-table and glass, a writing-table and a writing-chair, an easy chair, two mahogany chairs, a chest of drawers, clock and pictures; and, of course, an open fire, with

lowing advertisement from a New York paper, in 1803, will suffice to show that beautiful articles in the Empire style could be produced in this country. We read: "Honoré Lannuier, cabinetmaker, just arrived from France, and who has worked at his trade with the most celebrated cabinet-makers of Europe, takes the liberty of informing the public that he makes all sorts of furniture—beds, chairs, etc.—in the newest and latest French fashion; and that he has brought for that purpose gilt and brass frames, borders of ornaments and handsome safe locks, as well as new patterns."

Cabinetmakers and upholsterers flocked here in great numbers from England also, and we know from the advertisements that the native workmen industriously kept abreast of the latest fashions. The designs of the famous Mr. Stafford, of Bath, and Mr. Bullock, of Tenterden Street, were as well known in New York as they were in London.

Taking a few notes from advertisements regarding bedroom furniture, we find that Paterson & Dennis, 54 John Street, have, in 1810, a handsome assortment of fancy chairs, dining and bedroom chairs. The latter, unfortunately, are not described. C. Christian, in 1817, cabinetmaker, 58 Fulton Street, has "furniture of the finest quality and latest fashions," including "carved and plain bedsteads"; Paxton & Co., in 1817, sell "canted corner dressing and plain bureaus"; and Elam Williams, a cabinetmaker at 167 William Street, sells



5—A Late XIX Century Bedroom; Window Rocker, Sheraton Chairs, Heppelwhite Bed with Modern Drapery

the usual brass furnishings. It will be noticed that these rooms of north and south are practically eighteenth century in style, but in conservative homes such bedrooms lingered for many years and still exist in many country houses owned by the descendants of the original possessors.

That the Empire furniture came to this country we have abundant proof. Some of the very best examples crossed the water to furnish Joseph Bonaparte's house near Bordentown, N. J. The furniture that he imported to adorn "Point Breeze" was of the richest description, as the few specimens still in this country prove. Scarcely less sumptuous was the furniture owned by Madame Jumel, which came to auction in 1821, and was described in the advertisement as "being a careful selection made in Paris by the best judges from the museum and palace of the late Emperor." This superb furniture was placed in the Morris House on Harlem Heights, purchased by Madame Jumel in 1810. She could well afford rich furniture, and her life in Paris under the patronage of the Marquis de Lafayette gave her every opportunity to know what was correct.

The wealthy homes of New York, Boston, Philadelphia, Baltimore, Washington, Richmond, Charleston, etc., were constantly refurnished to suit the fashion of the day. Fine articles were imported, and many excellent cabinetmakers and upholsterers came to this country in the early days of the republic, as they had done during Colonial times. The fol-



6—The "French Bedstead" Had a Long Popularity

"pillar and claw tables, mahogany bedsteads, field and high-post bedsteads," in 1818. In 1812 "high-post mahogany and field-top carved bedsteads" and "orange bed and window curtains with gilt cornices" come to auction. Other pieces of bedroom furniture advertised in the first quarter of the century are: "French dressing-bureau and toilet glass" (1823); "French pillar and column bureaus with toilets complete" (1824); "ladies' writing secretaries and dressing-

bureaus" (1824); "a wardrobe with center dressing bureau" (1826); "toilets with hanging wardrobes" (1826); and "ladies' superb dressing bureaus and toilets with glasses" (1826). It will be noted that the word bureau has come into general use for a dressing-table. This originated in the fact that the dressing-table frequently contained a desk or the front of the top drawer let down and formed a desk. Sometimes the dressing-bureau was in the form of a chest of drawers. The examples in Nos. 2, 3 and 4 were very popular during the nineteenth century, and exist to-day in the hundreds. Upon the top slab a dressing-glass with drawers was usually placed. Another form, with a swinging glass on upright posts, is also shown in No. 3. This dates from about 1840 to 1860.

The old-fashioned chest-upon-chest and high-case of drawers, erroneously called "high-boy," was banished in the nineteenth century bedroom for the cumbersome four-square wardrobe. This was not unfrequently of huge proportions, and from about the middle of the century often had looking-glass doors or panels. The redeeming features of the wardrobe were that it was usually made of beautiful mahogany, solid or veneered.

It contained a convenient arrangement of drawers, shelves and pegs for clothes. These wardrobes were often used as linen presses, although they stood in the bedroom.

In his last years Sheraton fell under the influence of the Empire. He had always followed the French styles, as his first book shows; and he gradually changed the Louis XVI style for that of the Empire. Among his latest plates (he died in 1806) are many designs for the sofa-bed, also called "lit de repos" and "lit anglaise." "The frames of these beds," he says, "are sometimes painted in ornaments to suit the furniture. But when the furniture is of very rich silk they are done in white and gold and the ornaments carved. The cornice cut out in leaves and gilt has a good effect. The drapery under the cornice is of the French kind; it is fringed all round and laps on to each other like unto waves." As

the "sofa-bed" continued fashionable until about 1830, a few descriptions may be interesting.

A canopy and sofa-bed in 1817 has silk draperies of dark green lined with lilac and buff. These fall from a kind of crown and are trimmed with lace and gold fringe. "A muslin embroidered drapery is applied as a covering in the daytime."

A small bed, designed in 1816, for a "young lady of fashion," has hangings of light blue silk lined with a "tender shade of brown." The curtains, which are drawn up by silk cords and embellished with tassels, are supported by rings and rods of brass.

A design sent from Paris in 1816, and labeled "French bed," is described as "an English bed with corner posts, decorated agreeably to Parisian fancy." The framework is made of rosewood, ornamented with carved foliage, gilt in matt and burnished gold. The drapery is of rose-colored silk, lined with azure blue, and consists of one curtain gathered up at the ring in the center of the canopy, being full enough to form the festoons and curtains both of the head and foot. The curtain is edged with fringe.

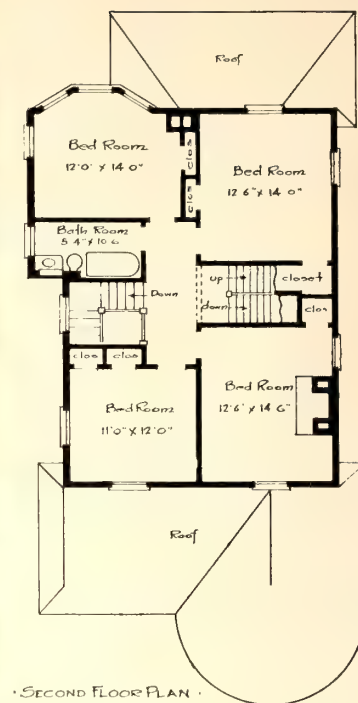
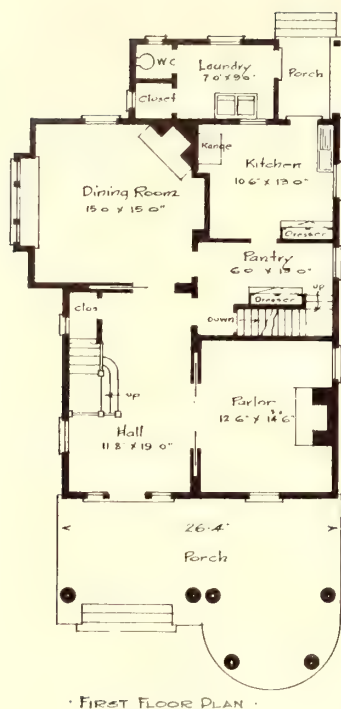
"The taste for French furniture," writes an authority in 1822, is carried to such an extent that most elegantly furnished mansions, particularly the sleeping-rooms, are fitted up in the French style." He recommends a "sofa or French bed." "The sofa is highly ornamented with Grecian ornaments in burnished and matt gold. The curtains and inner coverlids are of white satin. The outer covering is of muslin in order to display the ornaments to advantage and bear out the richness of the canopy. The dome is composed of alternate pink and gold fluting, surrounded with ostrich feathers, forming a novel, light and elegant effect; the drapery is green satin with a salmon-colored lining."

The influence of the Empire upon mahogany furniture lasted from 1830 to the period when factory-made articles supplanted those of hand work.



7—A Bedroom Furnished and Decorated in Louis Quinze Style





1—The Piazza Is an Indispensable Feature of the Small House

Small American Homes

By Paul Thurston

Four Houses at Wayne, Pennsylvania



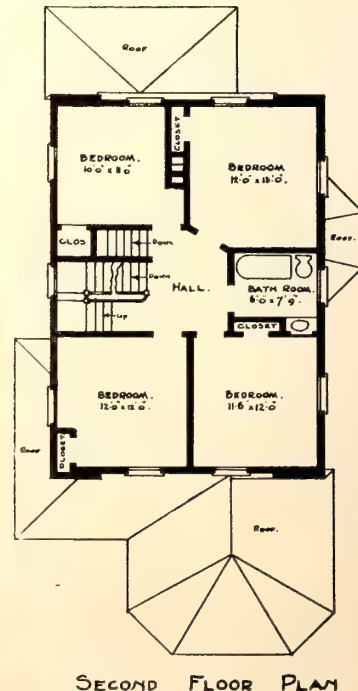
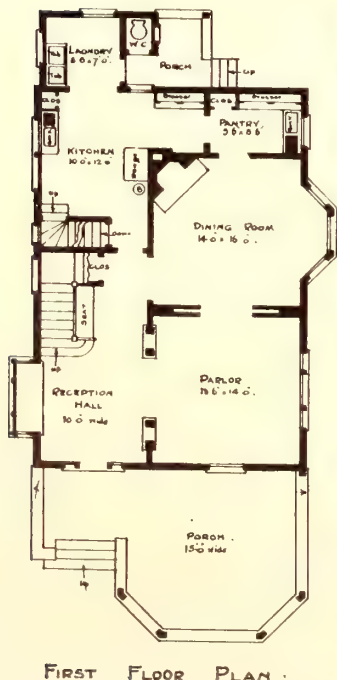
ONE of the most difficult problems which confronts all architects is the building of inexpensive houses that contain characteristics which make them distinctive and, at the same time, embrace all the features and comforts of the modern up-to-date house.

While the plans of each of these four houses designed by Mr. Laurence Vissher Boyd, architect, of Philadelphia, Pa., which are illustrated herewith, are somewhat similar in the arrangement of their rooms, showing the same number of

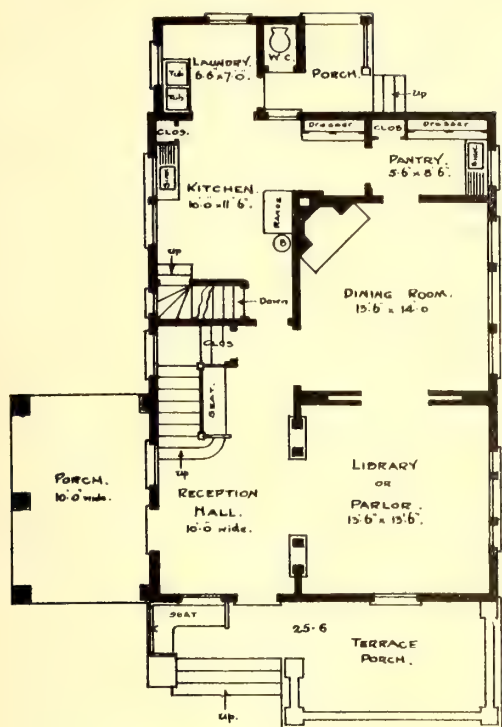
them, this is the result of much specialized study by the architect. A greater freedom was exercised in the designing of the exteriors, the object being to avoid, so far as possible, a development along one line.

The house presented in Figs. 3 and 4 is eminently simple. The terrace porch of the front is inclosed within a balustrade and is partly covered by a hood supported on wooden brackets; an old armed settle stands at one side. A living-porch, isolated and on the side of the house, is reached from the hall.

The building has a rock-faced stone underpinning, and the superstructure, from the underpinning to the peak, is covered



2—Similarity in Plan by no Means Necessitates Similarity in Exterior Design



FIRST FLOOR PLAN.



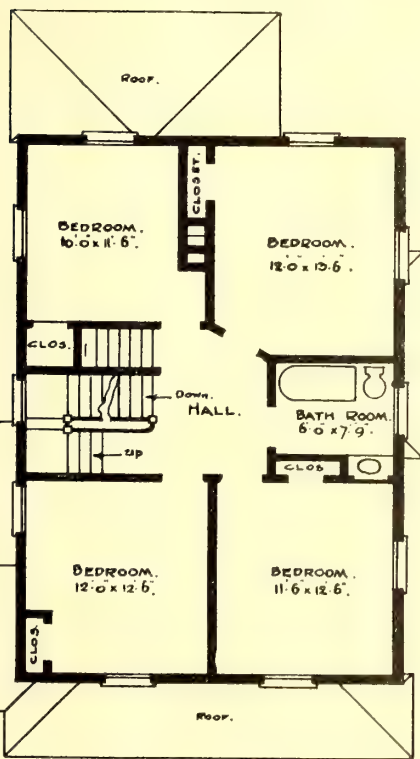
3—A Simple Exterior Painted White, with Green Shutters

with hand-split cypress shingles laid nine inches to the weather, and painted white, harmonizing well with the green painted blinds and the tile-red color of the stained shingled roof. The woodwork around the sash and the sash frames are painted white. The interior plan shows a reception-hall, library, dining-room and kitchen on the first floor, four bedrooms and bathroom on the second floor and two bedrooms and a trunk room on the third floor.

The hall is trimmed with chestnut and stained a Flemish brown. It contains an ornamental staircase with a seat at one side. The library is trimmed and finished in a similar manner, and is separated from the hall by an archway with columns resting on paneled pedestals. The dining-room is

painted old ivory white and has a plate rack around the room. A brick fireplace, with a Colonial mantel, is in one corner. The butler's pantry is fitted with dressers, sinks and cupboards. A door opens from the pantry to the kitchen and laundry, both of which are trimmed with chestnut and finished natural. The former is fitted with a range, sink and a pot closet, while the laundry is fitted with washtrays.

The four bedrooms on the second floor are trimmed with chestnut and are finished natural. The bathroom is painted with white enamel and is finished with porcelain fixtures and exposed nickelplated plumbing. The two bedrooms on the third floor are treated with ivory-white paint. There is a cellar under the entire house, containing the heating appa-



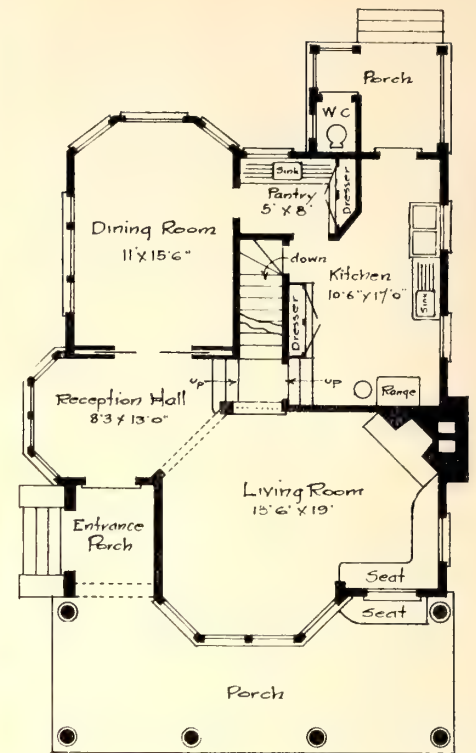
SECOND FLOOR PLAN.



4—The Living-porch on the Side Is Quite Distinct from the Entrance Porch on the Front



5—The Gambrel Roof Is the Leading Motif of this Design



• FIRST FLOOR PLAN •

ratus, fuel rooms and storage, all conveniently arranged.

The house shown in Figs. 5 and 6 is quite distinct from the one shown in Figs. 3 and 4. Mr. Boyd, in designing this house, accepted the gambrel roof as his leading motif. The piazza across the front has Doric fluted columns supporting the roof. This treatment, together with the stone and brick chimney, form the chief architectural features of the exterior.

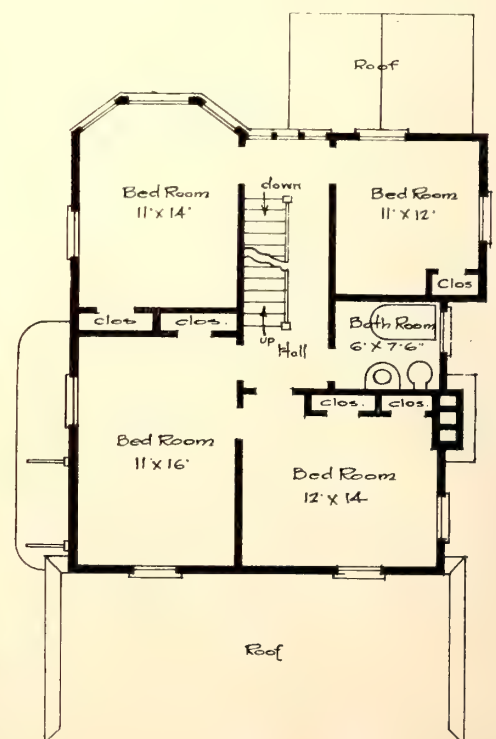
The underpinning is built of rock-faced stone, and the building, above, is covered on the exterior with white pine shingles, stained a silver gray, while the blinds and trimmings are painted white, and the roof is covered with shingles and stained tobacco brown.

The entrance is from the side, thereby giving a certain amount of privacy to the front piazza. The reception-hall

and the living-room are irregular in form; they are both trimmed with chestnut and finished in a Flemish brown. The hall has a bay-window and an ornamental staircase, which is in combination with the kitchen stairs, and the space usually allotted for a staircase is utilized for other purposes. The living-room is separated from the hall by a grille and arch. It has an attractive corner fitted with an open fireplace built of bricks, with the facings and hearth of similar brick and a mantel of good design. From the fireplace a paneled seat extends along the wall and returns to the bay-window on the front. The dining-room is at the rear of the hall and is painted old ivory white. The pantry and kitchen are trimmed with chestnut and are finished natural. Each is fitted with all the best modern conveniences complete. The



6—Doric Columns Support the Porch Roof



• SECOND FLOOR PLAN •

four bedrooms on the second floor are trimmed with chestnut, stained and finished in Flemish brown. The bathroom is painted ivory white and is fitted with porcelain fixtures and exposed nickelplated plumbing. There are two bedrooms, painted white, and a trunk room on the third floor, while a cemented cellar contains a heating apparatus, fuel rooms and laundry.

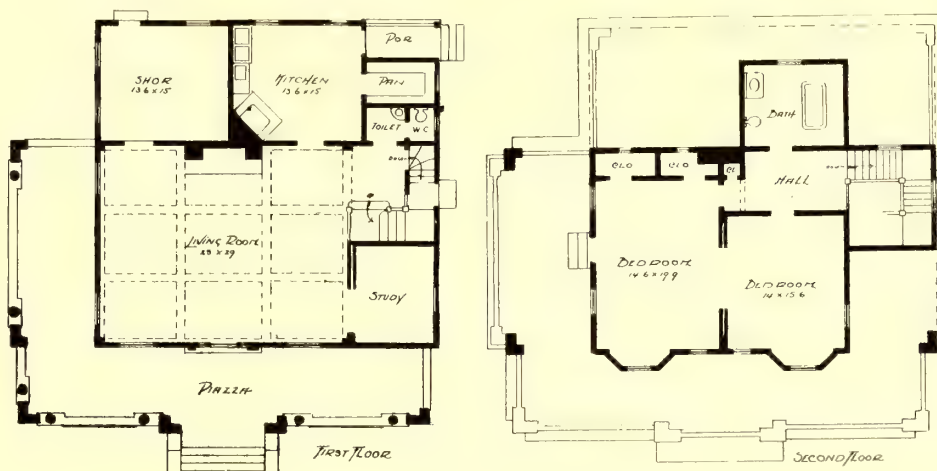
The house shown in Fig. 1 has an attractive piazza with Doric columns, bay-windows and a roof with dormer windows. The walls and roof are covered with cedar shingles left to weather finish. The entrance hall and living-room are trimmed with chestnut, stained and finished in soft brown. The living-room has an open fireplace with red brick facings and hearth, and mantel. The dining-room is painted old ivory white and has a bay-window with seat, a nook for buffet, and an open fireplace with tiled hearth and facings and a Colonial mantel. A door opens into the pantry and rear hall, from which stairs rise to the second and third stories and descend to the cellar. Another door opens into the kitchen, which contains range, dressers and sink. The laundry is fitted with laundry tubs and a store closet.

There are four large bedrooms on the second floor, trimmed with chestnut. One of these bedrooms has an open fireplace with facings and mantel. The bathroom is painted with white enamel and is finished with porcelain fixtures and exposed nickelplated plumbing. There are two bedrooms and a storage room on the third floor. A cemented cellar contains the heating apparatus, fuel rooms and storage space.

A fourth house (Fig. 2) has an exterior covered with pine shingles, with the roof covered with similar shingles stained moss green. The trimmings and blinds are painted old ivory white. The underpinning is constructed of local rock-faced



7—A Design Based on Spanish Motifs



ing. There are two bedrooms and trunk room on the third story and a cemented cellar contains a heating apparatus, fuel rooms and storage space.

House of Jacob Menken, Esq., at Dyker Heights, New York

Mr. Menken's house shows a conformity to historical styles of Spanish feeling. The principal features are the broad piazza and loggias. The balustrade of the piazza and the exterior of the house is built on a frame construction and covered with metal lath and stucco composed of Portland cement. The quaint sloping roof forms a cover for the house and the loggias and is sheathed with shingles finished natural.

The entrance is into a great square living-room, twenty-three feet wide and twenty-nine feet in length. It is trimmed with quartered oak, and has a massive beamed ceiling and a high paneled wainscoting. An open fireplace opposite the entrance is built with brick facings and hearth and a mantel of golden oak. To the right of the entrance is the study,



8—The Piazza and Loggias Are the Distinctive Features

with a high wainscoting finished with a plate rack. The staircase to the second story is recessed into an alcove just beyond the space occupied by the study. Opening from the alcove is the lavatory.

The kitchen is conveniently arranged with a large pantry, range, sink and laundry tubs. The shop off the living-room is fitted with all the appliances for work. The room could be utilized for a dining-room under ordinary circumstances.

There are two bedrooms and a large bathroom on the second floor; the bathroom is wainscoted with tiles and is furnished with porcelain fixtures and exposed plumbing.

The house cost five thousand five hundred dollars complete, and was designed by Mr. C. Schubert, architect, of Dyker Heights.

A Concrete Block House on Staten Island

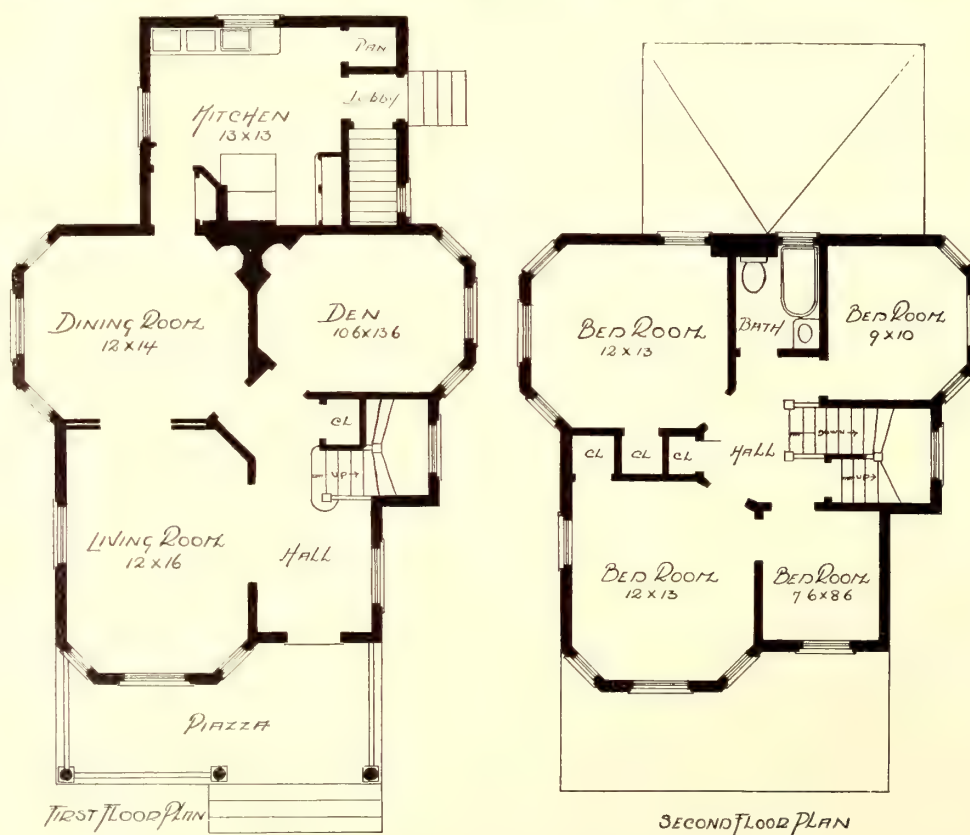
The blocks of which the main walls of this house, which was built by Mr. James W. Hughes, were constructed were made in a Normandin machine, a small shed supplying the necessary shelter for the blocks until hardened enough to be piled in the yard, where they were kept wet for about ten days. While the blocks were hard enough to be laid in the wall in two weeks, it was possible to make enough in advance so that the majority were nearer a month old before moving them from the yard. Three sizes of blocks

were used, 12 inch for the basement, 8 inch for the walls and 6 inch for the interior partition walls. The blocks were made of Atlas Portland cement and coarse sand, in the proportion of one of cement to four of sand. The walls were laid up in a cement mortar. These blocks are easily laid,

for they require a small number of joints and little mortar. There is, of course, some objection to the uneven breaks in the blocks about the windows and doors and at the corners of the building, but this is very easily overcome, as in the present case, by giving the whole structure a coat of cement mortar finished with a pebble dash.

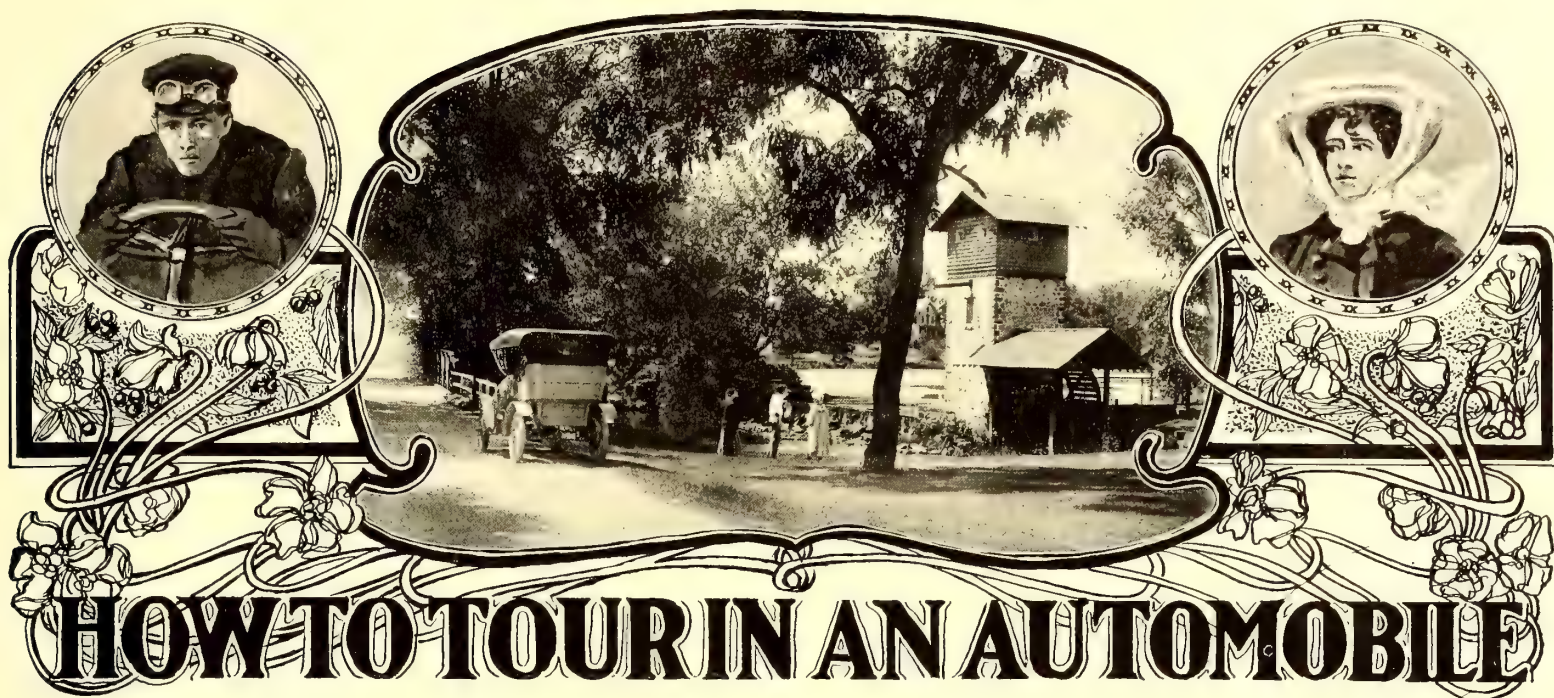
There have been quite a few houses built with solid reinforced concrete walls, but this hollow block construction has an advantage over the former, for the reason that the hollow spaces keep out all possible dampness and also form good ducts for the running of ventilating flues, pipes and electric wires.

The exterior walls are tinted a cream yellow, while the sashes and the smooth spaces about the windows are painted white. The blinds are painted bottle green, and the roof is covered with shingles stained a moss green. The plans practically reproduce an earlier house. The hall is trimmed with oak, and it has an ornamental staircase with turned balusters and newel posts. The parlor and dining-room are separated by sliding doors, and each is trimmed with oak. The dining-room has an open fireplace built with brick facings and hearth and an oaken mantel. The den is also trimmed with oak and contains an open fireplace the same as the dining-room. The kitchen and its dependencies are complete in their appointments. There are four bedrooms



9—A House Built of Concrete Blocks

and a bathroom on the second floor, and one servants' bedroom and trunk room on the third floor. The bathroom is finished with porcelain fixtures and exposed nickelplated plumbing. The cellar, cemented, is provided with a hot-water system of heating, fuel rooms and storage space.



By Harry B. Haines

IDEAS differ widely, of course, as to the most suitable type of car for touring. Many enthusiastic motorists who have toured thousands of miles prefer to drive in a light high-powered runabout of the style that has leaped into sudden popularity within a year. A strictly limited amount of baggage can be stowed away on the rear deck in a leather waterproof bag or in a steamer trunk strapped on the deck, and a rubber poncho can be carried for protection against rain. With powerful headlights for night driving, and a good blanket for sleeping out at night, if necessary, one can drive for days through the roughest country in remote mountain regions. He will, however, enjoy a sort of selfish pleasure, for at most he can carry only one friend and a mechanic, as the car has only one regular double seat, which is supplemented by a folding rumble seat behind that offers nothing in the way of comfort on a hard day's jaunt. The majority of tourists prefer the regular touring car, with side entrance body, having comfortable seating accommodations for five or seven persons. In such a car, properly fitted out for the purpose, a whole family may travel for weeks almost as luxuriously as in a Pullman railroad car, regardless of weather. The question of suitable equipment for touring is one that requires considerable thought. It is possible to spend many hundreds of dollars for all sorts of fittings. Some of these are almost indispensable to comfort and satisfaction on the road, while others only serve to encumber the machine unnecessarily. Although

each device may really serve a useful purpose, it should be remembered that, as in traveling by other means or when camping, the less paraphernalia one has to bother with the greater is his ease of mind and his consequent enjoyment. Too often we pack along on a trip or vacation a bothersome quantity of stuff, much of which is never used. On the other hand, if we confine ourselves to the things that are really essential, we are likely to be surprised by the small amount of baggage that we have to take.

Conceding that the automobile tourist desires simply to fit up his car with the attachments and devices that will add to the utility of the machine and to the comfort and safety of the passengers, there are certain things which it will be abso-

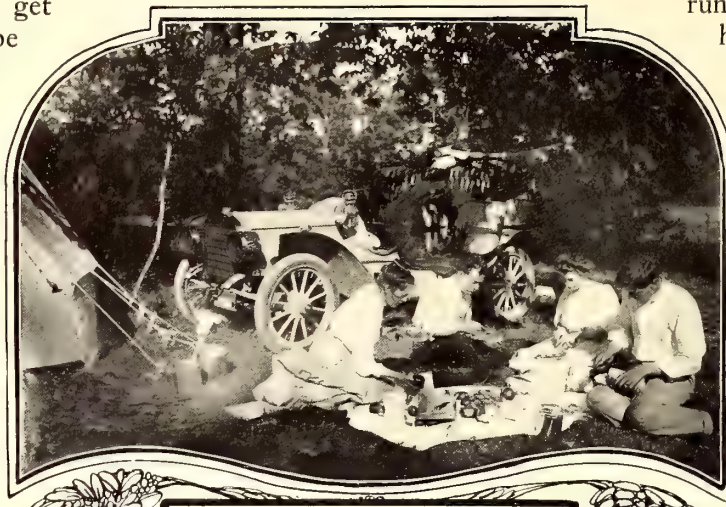


In Such a Car a Whole Family May Travel for Weeks as Luxuriously as in a Pullman Railway Coach



lutely necessary for him to have. A comfortable Cape top and glass front are indispensable. In buy-

ing a Cape top one should also get a waterproof protector, to be slipped over the top when it is thrown back. This will keep the dirt and dust out of the lining and prove a profitable investment. The machine should be fitted with a set of good shock absorbers, to protect the springs from breakage when traveling over rough country and also for the purpose of adding to the comfort of the occupants. A dashboard speedometer-odometer is another necessity



The Evening Meal

running, and five or ten miles an hour out of the way is no uncommon error. The speedometer will not cost much more than the fines a country justice may impose, to say nothing of the trouble and delay occasioned by arrest. Besides this, there is a great deal of truth in the statement, "It's nice to know how fast you go," and it is often fascinating to see the little needle on the instrument move up the scale as the car speeds steadily on under advanced



After Pitching the Tent the Cooking Utensils are Soon Put in Use



A Limited Amount of Baggage Can Be Carried on the Folding Trunk Rack

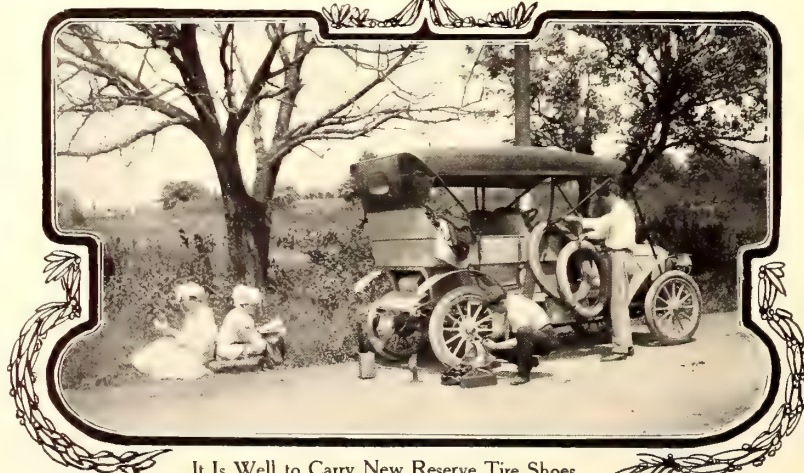
when touring. Driving directions in many route books simply give the measured distances between prominent landmarks in sparsely settled country. For example, the book might read, "After passing large red farmhouse on left continue straight ahead a mile and a half and keep to right at fork in road." It will be seen that it is absolutely necessary to know when that mile and a half has been passed, and the odometer is the only instrument that will accurately give this information. The speedometer part of the combination is useful in view of the fact that speed ordinances and restrictions are becoming more severe every year, and when one is riding in an auto there is nothing more deceptive than speed. Even experienced men who have driven many thousands of miles are unable accurately to guess the speed at which a car is



A Tent Can Be Carried Tourists Wish to

Along in Case the Camp Out

spark and heavier charges of gas. When touring it is well to carry two new reserve tire shoes. When front and rear wheels are of different size, there should be one spare for each pair of tires. The new flat treads are recommended for the rear wheels, but not for the front, as they make steering rather difficult. Extra tires should be covered with waterproof and light-proof casings, as rubber deteriorates when exposed to the light. It is advisable to carry at least two rear inner tubes and one front tube; when touring myself I invariably carry four rear tubes and two front tubes, having experienced as many as five punctures in a single day. Tire troubles are due to various causes, and it is well to be prepared for them. A pigskin repair cover will be found valuable in temporarily fixing a blown-out casing. In the event of a puncture it is advisable to insert a new inner tube rather than to



It Is Well to Carry New Reserve Tire Shoes

repair an old one, as it is almost impossible to make a satisfactory repair job on the road. Inner tubes for use in rear shoes should never be repaired with rubber patches cemented on. The heat caused by road friction melts these patches off. The only sure way is to have the tube vulcanized. Inner

will scarcely be used unless the party intends to camp out for the night. The automobile of to-day has such a wide radius of action by reason of its high speed that this is seldom necessary, as it is nearly always possible to reach a town or large city by night. It is best to have the car equipped with good headlights and a reliable generator or gas tank, as it sometimes becomes necessary to do night riding in a strange country. Even with good lamps it is never safe to drive faster than twenty miles an hour at night on roads with which one is not familiar, as danger can arise in an instant. The machine should always be kept under perfect control; half of the accidents that occur are due to careless driving.

Among the miscellaneous items that are needed and which come in very handy are a collapsible gasoline bucket with chamois strainer, collapsible water bucket, ammeter and voltmeter for testing the batteries, small electric flashlight to examine the car at night in the event of accident, and a dash clock.

Most cars of to-day have plenty of carrying and storage room. The extra tires are usually strapped to the running board with special holders. Inner tubes may be stored in the space under the rear seats. Extra boxes on the running board will provide a place for carrying tools, while a metal trunk rack fitted with leather auto trunks, that are dustproof and waterproof, will serve for baggage.

The modern touring car, properly equipped, is capable of railroad speed and will take a party safely across



A Good Spot for Luncheon

tubes should not be carried loose in a storage box, but should be put up in separate bags liberally sprinkled with French chalk, in order that they may not become chafed and so be rendered unfit for use.

An experienced tourist is not ready to start until the car is equipped with a full set of tools, extra valves, valve springs, spark plugs, and such small moving parts of the engine as are likely to wear quickly or break easily. Of course, this list will differ with each make of car. In machines that are chain driven extra links of chain are carried in the toolbox. A jack, tire tools, and full tire repair kit are, of course, essential. In mountain touring it is necessary to have non-skid chains, which must be used when coming down long hills slippery with mud after a heavy rain. The car, unless equipped with these, may skid and become unmanageable. In the early days rope was tied around the rear wheels to give them traction, but the newer and more serviceable tire chains or non-skid treads have taken its place and made driving on slippery asphalt or "greasy" country roads much safer. Protection of the car and its occupants from mud and water has been looked after mostly by the manufacturer before the car left the factory. Cape tops and folding glass fronts do much to keep the car dry and comfortable in rainy weather. The machinery is also protected from mud and water by metal casings. It is advisable, however, to have mackintosh covers for the lamps when touring, so as to avoid the need of continual cleaning and polishing, and if the magneto is under the bonnet where rain may possibly reach the connections, they should be protected with a rubber arrangement suitable for that purpose. Many manufacturers neglect to furnish this, and as a consequence their cars have been stalled in wet weather by water getting into the magneto and short-circuiting it. The greatest care should be taken to keep water away from all the electrical parts of the machine.

It is possible, of course, to make a tent part of the equipment, but this



A Cape Top and Waterproof Protector are Indispensable



Cape Top and Folding Glass Fronts do Much to Keep the Car Dry and Comfortable in Rainy Weather

country, up hill and down, in rain or shine, with more pleasure than can be derived from any other method of transportation. The man who owns his automobile has his private car as luxurious as a Pullman, with all the roads of the country as his right of way and no schedule other than that fixed by his own fancy and convenience.

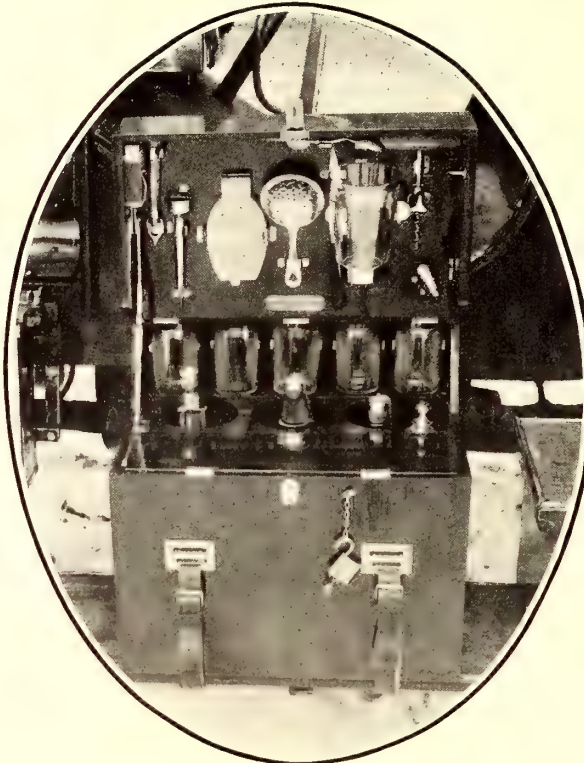
The writer has always found it preferable to lay out the route intended to be followed. He has also found it a convenient practice to have a leather case made with a celluloid front in which the road directions can be placed. The map or directions can be read through the celluloid, which, however, protects them in case of rain. The easiest way to get along when asking road directions of natives in various towns is to know the name of the next following town and then ask the best road to it, if the road book directions are not explicit. For instance, before starting on a trip I generally take a map of the country through which I am going to travel and ascertain the various small towns through which I have to pass. These are listed, and as I proceed I inquire the way from one to another. This method has been found satisfactory, for when one asks the road directions to the larger cities, which may be ten, twenty, or more miles apart, it is difficult to find anyone who can direct you properly, but any boy or girl can tell you the best road to the next town, which will probably be from three to five miles away.

Having selected a route that you wish to travel, it is well to make out a time schedule and try to follow it, making due allowance in advance for delays en route and for the time that will be spent in viewing the scenery and points of interest.

You may have a fifty horsepower car, capable of a mile a minute speed, but if you are going to use the car for touring and expect to get any pleasure out of the tour, it would be better to have the machine geared down to forty miles an hour, so that it will have additional hill-climbing power. It is not the car that can go fastest on the level that can cover the greatest distance in a day, but rather the machine that is consistent in its performance and keeps "plugging" along, up hill and down, hour in and hour out, and always drawing steadily toward its destination. The tourist who really wants to see the country through which he is passing and to enjoy a sensible ride rather than a mad dash against time, would do well to plan his schedule on the basis of covering twenty miles an hour—or less, if he does not have a high-powered car. This would be slow on the smooth, level roads, but where the country is

rolling, an average of twenty miles an hour is a good one, and to maintain it the car will be going at twenty-five and even thirty miles at many places. Besides, twenty miles is the legal limit in most States. Connecticut's new law, however, abolishes the speed limit but makes arrest possible for reckless driving if one travels over twenty-five miles an hour.

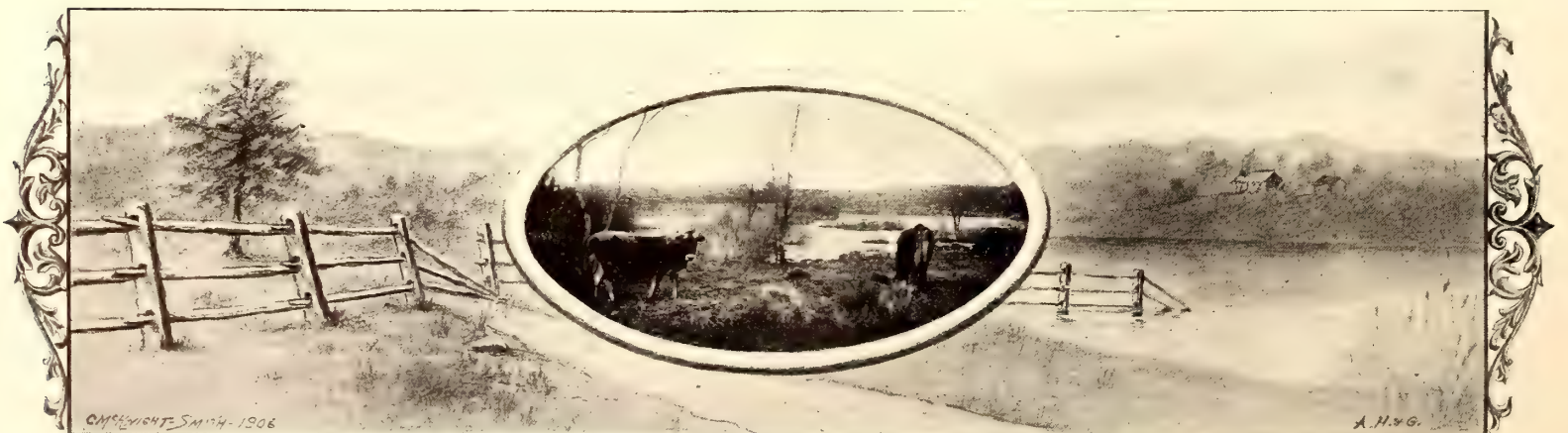
It is safe to presume that every motorist seeks to get as much pleasure and comfort out of touring as possible. The States of New York, New Jersey, Pennsylvania, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine offer not only the most beautiful and varied scenery but the finest of roads. One particularly beautiful route which I have had the pleasure of taking leads from New York City up along the west side of the Hudson River to Newburg and Pine Hill, N. Y., and then to Binghamton, Bath and Buffalo, whence last year's Glidden Tour route may be followed to Rochester, Syracuse, Utica, Albany, Saratoga and Lake Champlain, N. Y.; Three Rivers, Montreal and Quebec, Canada; Jackman, Maine; Rangeley Lakes, and then to Bretton Woods in the famous White Mountains of New Hampshire. The roads, with the exception of some stretches in Canada, are good. The return journey may be made by the way of Concord, N. H.; Boston, Worcester and Springfield, Mass.; then to Lenox in the Berkshire Hills, down through the beautiful Housatonic Valley, across to Poughkeepsie, and down along the east shore of the Hudson River to New York. This



A Handy Refreshment Kit for the Tourist

route can be considerably shortened and many bad roads avoided by following directly up the west side of the river from Newburg through Kingston, Albany, Schenectady, Saratoga, Glens Falls, Ticonderoga and Plattsburg to Montreal.

Taking a trip like this, which is one of the most attractive in point of scenic grandeur in the eastern United States, the itinerary can be laid out so that each day's run can be made easily and comfortably, allowing time for a noonday stop for luncheon, and confining the riding to daylight. The shorter trip could be made with ease in from two to three weeks, allowing plenty of opportunity to jog along easily, rest each Sunday, and enjoy the tour without hurry or bustle.



Port Sunlight

A Significant English Experiment in Village Building

By Mabel Tuke Priestman



HE village of Port Sunlight occupies an area of one hundred and forty acres, together with ninety acres devoted to the buildings of the business for which it was created. It is located about five miles from Birkenhead and seven miles across the river from Liverpool.

How best to make the village beautiful has been the subject of careful consideration, and no dump heaps have been allowed to mar the beauty of the landscape. When the estate was laid out gutters were filled up and the land leveled at the bottom of the ravines until they were raised above the high water mark. These ravines are being made into parks and recreation grounds, and are becoming the feature of the village. The land occupied by ravines consists of twenty-five acres.

At the junction of Bromborough Pool a dam is in course of construction which will cut these parks off from the incoming tide, and also serve to carry a road at that point across the pool. The direct and shortest ways to important points—such as the railway station, the ferry, the car terminus and the roads to the office and works—are planned in the most direct and shortest route, but wherever possible they have curves and

sweeps following the lines of the ravines, giving a picturesque quality to the village only obtainable by such methods. Another plan for civic betterment has been thought of in the laying out of the village; that is, none of the houses have their backs to the railway line. We are only too familiar with the miserable surroundings of most railways near large factories, not to appreciate what this alone means in beautifying Port Sunlight.

The roads are of excellent proportion, being forty feet wide, the majority having eight yards of roadway and eight feet each for foot-paths. A few of the widest roads have twelve yards for roadway and twelve feet for pavements.

Several of the ravines are spanned by well designed bridges, which are distinctive features.

Another interesting feature is the open-air theater, situated in Dell Park. The fresh green sward of the park is

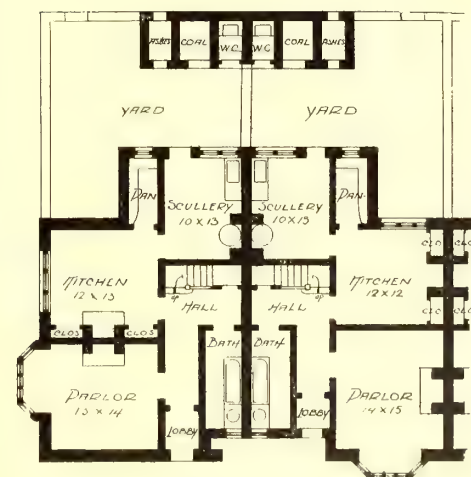
pleasingly broken by red gravel paths. It has a seating accommodation of two thousand four hundred. The entire floor has been cemented, a most necessary precaution in the damp climate of England. The natural slope of the banks of the ravine has lent itself admirably to the arrangement of seats raised one above the other, on the classic lines of the Colosseum.



A Street from Without



Shingled and Half-timbered Cottages



FIRST FLOOR PLAN

Near by a gymnasium has been built for the men, boys and girls. A triangular piece of ground adjoining one of the ravines has been profitably used as an open-air swimming bath. The shape of the bath is oval, one hundred feet in length and seventy-five feet in breadth. Wooden dressing-rooms with quaint thatched roofs add a picturesque note to the surroundings.

The first public building to be erected at Port Sunlight was the Gladstone Hall, opened by the late Right Hon. W. E. Gladstone, in 1891. It is used as the woman's dining-hall and a concert room. It has a spacious stage, with foot-light and stage curtain, concerts and theatrical performances being given here during the winter months. In addition there is a large kitchen with every necessary appliance for cooking and heating the workpeople's food, which is done free of charge. As the hall was inadequate for the needs of the village, an addition has been built, which is named Hulme

Hall. This contains dining-rooms devoted entirely to the use of the women and girls from the works, fifteen hundred of whom sit down at one time in groups of six at a table. The following is a fair example of the tariff in the restaurant: Meat and potatoes, hot pot or roast mutton, four cents; pudding, two cents per plate; soup per pint, with slice of

bread, two cents; pie two cents; tea, one cent per cup; bread and butter, one cent. Needless to add that the restaurant is not run at a profit, but the amount received for the food supplied to the girls, in addition to paying for the food, also defrays the cost of cooking and attendance. Only the best that the market can supply is provided. A happier or

brighter sight than the hall at noon, with hundreds of cheerful girls seated at the tables, would be difficult to find.

The village post office and telegraph office focus the attention of the visitor. They were originally built as a block of cottages, with a shop at one end. The half-timber work in this shop is of solid oak, and it is built in the same way as it would have been had it been erected three hundred years ago. In fact, all the half-timber buildings at Port Sunlight are reproductions of houses built at that time.

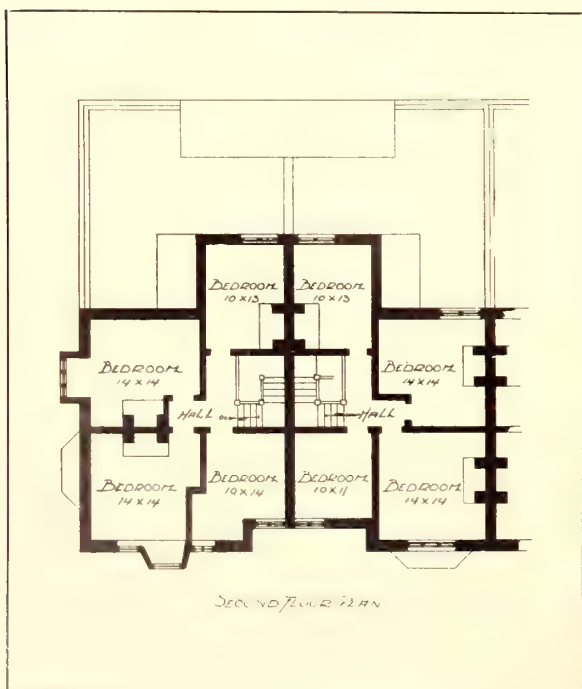
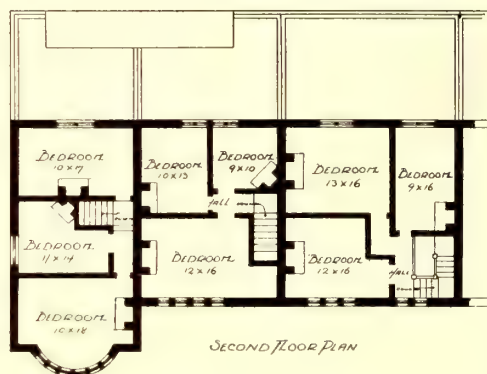
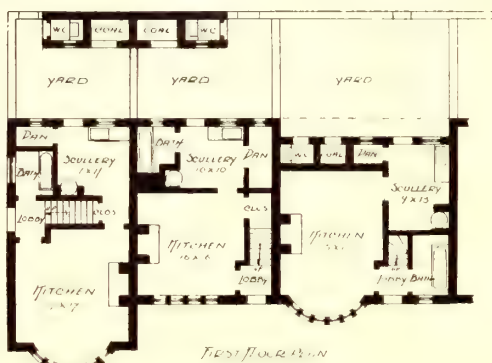
The men's social club house, with its beautiful pavilion, bowling green and quoiting ground,

has proved a most successful building for its intended purpose. It is well equipped with billiard-rooms, and chess, drafts and ping-pong may be played. There is also a reading-room, where the leading periodicals and newspapers of the day are to be found.

Instead of the corners of terraces being disfigured by shops,



A Corner Garden



Real Interest Is Combined with Genuine Variety



The Men's Social Club

The Village Inn is another point of interest. At first it was run on temperance principles, but now it has a six-day license, and is run on the methods advocated by Earl Gray and the Bishop of Chester. The Inn provides day accommodation for many hundreds of visitors, with sufficient number of bedrooms to meet the demands of those who wish to make a longer stay in the village.

The educational facilities provided for the residents and employees of the village of Port Sunlight are well patronized, and are productive of much good. The Technical Institute is one of the best in the north of England. It contains a large lecture hall and class rooms, replete with the latest apparatus for demonstrating purposes. The syllabus includes French, German, chemistry, mathematics, dressmaking, shorthand, typewriting and mechanical drawing. There are also classes for such advanced subjects as building, machine construction, mechanical and electrical engineering.

they are grouped in the center of the village, at the corner of Bolton Road and Bridge Street, and consist of grocery and provision shops, drapery and millinery shops and butcher shop. These stores are managed by the employees entirely, who provide the capital and divide the profits.

Over the entire area of these shops a girls' club has been provided. The side class rooms are divided by movable wooden screens, all of which can be removed when one large hall is needed. Sewing and ambulance classes are held here during the winter months, and in a lesser degree during the summer.

The Juniors have not been forgotten, as a beautiful club house has been built for them also.

The school buildings, both architectural and otherwise, are the pride of the village. All the social work of the village centers around these buildings. On Sundays undenominational services and Sunday schools are held in them by the resident minister. Instead of being only occupied by the day scholars five hours of the day, they are in constant use for social functions on week nights. With the new schools now being built, provision will be made for the accommodation of fifteen hundred scholars. One of the most beautiful pieces of architecture in the village is Christ Church, built for the Congregationalists.



An Open Comer with Retreated Houses

Another educational institution worthy of note is the Lever Free Library and Museum. The library contains over four thousand volumes, and in addition a reference library of standard technical and critical works. The museum contains an excellent collection of choice specimens of ancient and modern works of various schools, and forms a pleasing addition to the educational in-



Plain Walls Are Clearly Susceptible to Good Treatment

stitutions of the village.

In regard to the planning of houses at Port Sunlight there are two standard types of cottages: those known as The Cottage and the Parlor House, although there are some half dozen cottages with less accommodation than the standard type, and about a dozen houses occupied by the clergyman, doctor, schoolmaster and managers of heads of departments, which are designed to suit each

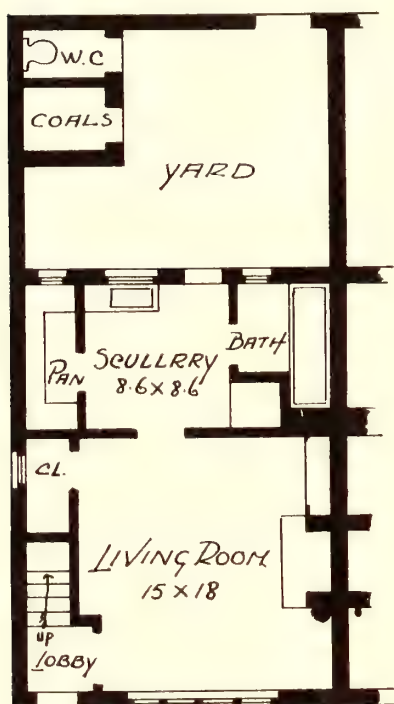


Cottages Set Back from the Street Provide Space for Front Gardens

the best specimens of flowers and garden produce, of which many an experienced gardener might be proud.

The cottages have been planned after much thought has been given to the subject. The type of house known as The Cottage provides for three bedrooms, besides a living-room, scullery, bathroom and larder on what is called in England the "ground floor."

Experience has proved that any variation as to the



FIRST FLOOR

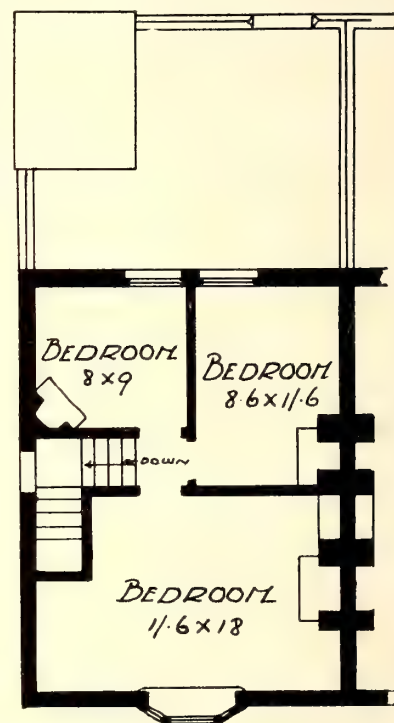
occupant. With the exception of these, all are built in the two standard types.

One of the rules of Port Sunlight is that the gardens shall be attended to by the company, as they do not choose to leave the planting and tending of them to chance, as the appearance of the village, as a whole, is felt to be of such paramount importance.

In addition to these front gardens, there are allotment gardens, rented at the nominal price of \$1.25 per annum for ten perches of land, water being laid on and supplied free of charge. These allotments the tenants cultivate themselves as vegetable gardens, or, when properly fenced in, use them for keeping poultry. These gardens are placed as near

placing of rooms or size has not been popular with the villagers. If the rooms are made larger it entails more work on the wife than she is able to devote to their care, and, therefore, the house soon loses its tenant. Again, if the rooms are small they can not accommodate the necessary furniture. Having settled by experience the most suitable type of cottage, it has been adhered to in all the cottages at Port Sunlight and in the adjoining village of Thornton.

The Parlor Cottages differ from the ordinary cottages in having an additional bedroom and a parlor. Usually the kitchen grate is in the scullery, so that all the cooking can be done there, leaving the



SECOND FLOOR

as possible to each cottage, and prove an unending source of interest and recreation to the tenants. Their use and appreciation are an evidence of the love of every Englishman for gardening and healthy recreation.

Every encouragement is given to indulge their taste by holding an annual flower show, where prizes are given for



The Block Corners Are Artistically Emphasized

kitchen to be used as a dining-room. This type of cottage is very popular for those who earn higher wages.

It has taken a capital of \$1,750,000 for this experiment, which includes the buying of one hundred and forty acres of land and the building of the cottages, schools, shops, institutions, clubs, etc., including the making of roads



Even the Chimney-stacks Contribute Their Quota to the Result

and the laying out of parks.

In 1878 the standard type of cottage cost one thousand dollars each to build, but in 1901 the same cottage cost one thousand six hundred and fifty dollars to build, which price has been steadily increasing, owing to the increase in the cost of materials. The first parlor houses cost to build one thousand six hundred and fifty dollars each, but in 1901 they cost two thousand seven hundred and fifty dollars, and they have been increasing at the same rate. The rents of the cottages have been fixed at such an amount as to pay for roads, taxes, repairs and maintenance. The standard cottages rent for eighty-seven cents a week, while the Parlor Cottage rents for one dollar and thirty-seven cents. The maximum limit possible for the maintenance of a healthy life has been decided as ten cottages to the acre, or four hundred and eighty yards per cottage. The village contains upward of six hundred houses and four miles of roadways, widening out at each junction into open spaces.

At Port Sunlight no monotonous and depressing rows of brick and mortar can be found, but only dainty looking cottages, in early English style of architecture. The cottages are built mostly in blocks, ranging from two to seven cottages in a block, and no two blocks are alike. In many cases they are almost entirely covered with ivy, clematis or climbing roses, and each villager tries to outdo the other in the im-

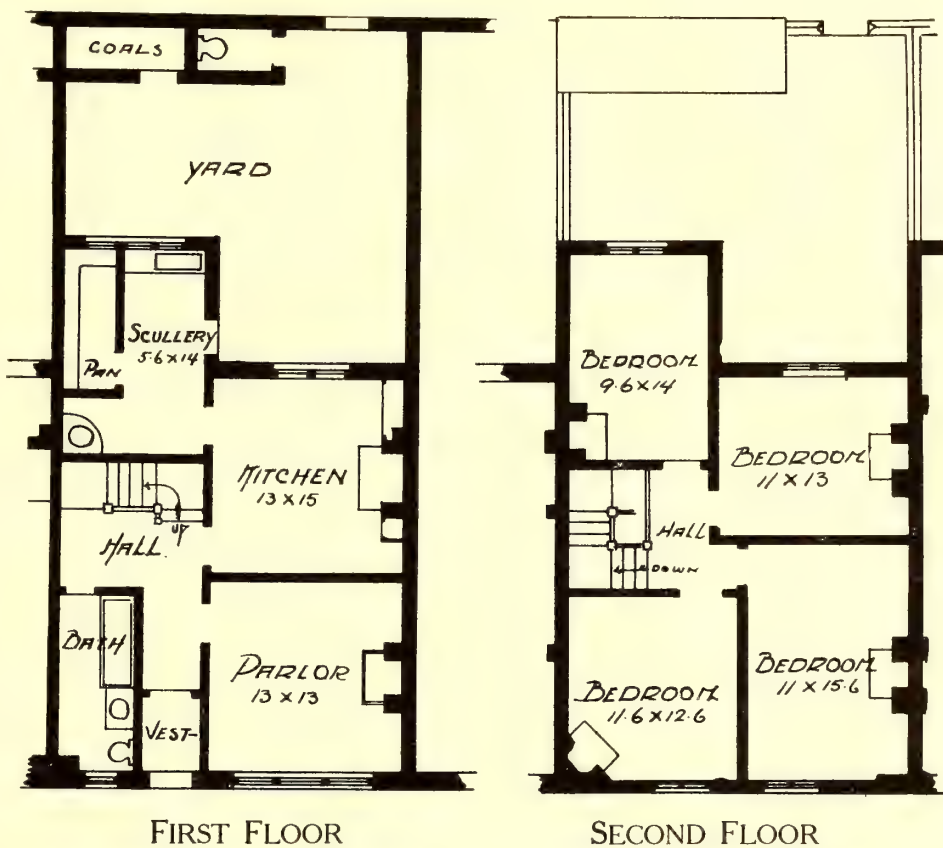
provement of his property. The interiors are remarkable for their comfort. The pretty latticed windows add to the attractive qualities of the rooms, and growing plants are found on the window sills and are placed on tables about the room. Every cottage has a bath.

The wives and children of the employees share in the general good, while the fact that in 1904 the birth rate was fifty-six and the death rate only eight speaks volumes for the general health of the villagers.

An evidence of the thoroughness of the whole scheme is the provision made for the safety of the employees in the soap factory. The most complete arrangements for guarding machinery are provided, but as accidents can not always be avoided, a room is fitted up as a surgery, and an ambulance carriage, replete with every comfort, is always on

hand; an ambulance corps has also been established, furnished with every facility calculated to minimize suffering and to prevent the ill effects which too often result for want of prompt and efficient attention.

Every provision is made against fire risks. In addition to small manual engines and fire buckets in each department, there is also a well equipped fire brigade station on the premises. The brigade is in charge of an experienced captain, and is composed of workmen in the factory, who are drilled periodically. A further protection is pro-



Allotment Gardens



Economy in Cooking Space

paid. A system of saving for this event has been established by a small weekly deduction being made on the wages, for which the company allows interest. The whole of this sum thus saved, with interest, together with the week's wages, is paid to each person when starting on their holiday.

At Port Sunlight the workers have a certain number of leisure hours, as the men work only forty-eight hours per week, while the women and girls work forty-five hours. They always have a holiday on Saturday afternoon. As they leave the works at 5.30 the other days they have ample time for healthy games in the long twilight evenings and to visit the various clubs and classes at their disposal.

The consideration for the well being of the employees has proved an undoubted success, not only commercially, but socially, and has not only improved the efficiency of the workers, but has added a zest to life generally. In this small colony

vided by the works by fireproof doors and an automatic sprinkling installation.

The employers are kept in touch with their employees through the Suggestion Bureaus, which are placed in prominent positions in each department of the work and offices. They are invited to write any suggestion that may occur to them for the increased comfort or well being of the workpeople, or for any improvements in the existing methods of dealing with the work, with a view of preventing waste, curtailing unnecessary expenditure or improving the facilities for labor. Prizes are awarded for the suggestions that are considered most worthy of reward. Over three thousand dollars has been given away in prizes.

Among the many benefits to employees the valuable aid given through the Employees' Benefit Fund must not be overlooked. It benefits all the employees of the company and the widows and children of deceased employees. The fund is provided solely by the company, no contributions being required from the employees.

The Employees' Holiday Club is another very popular institution. It enables all the employees who have been in the company's service for a period of six months to have a yearly holiday of a week, during which time the wages are



A Port Sunlight Interior

everything contributes to the betterment of life, and the younger generation have all they need to develop them into good citizens. In the home, in the community, and at the works, each man preserves his dignity as a man.



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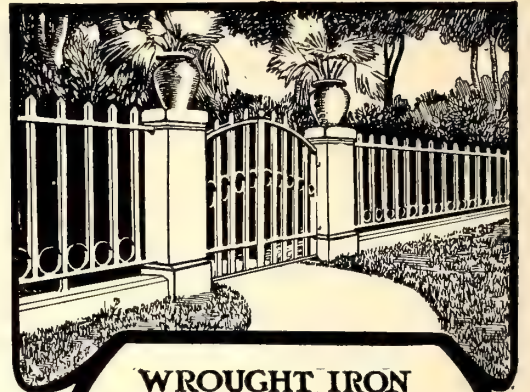
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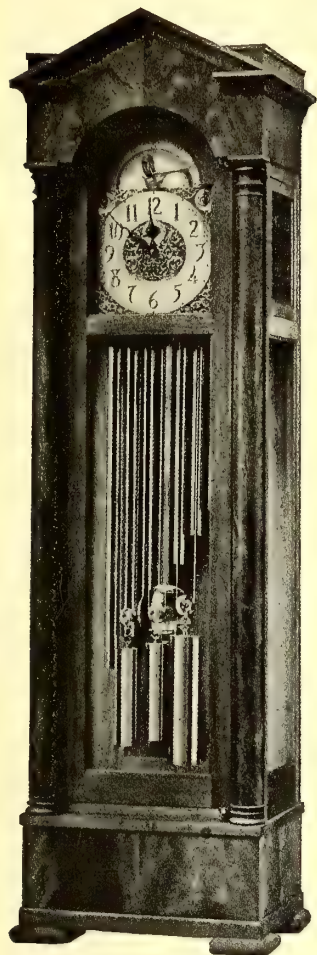
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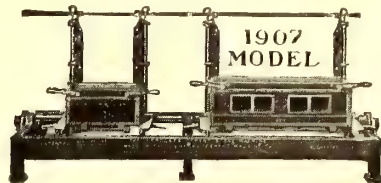
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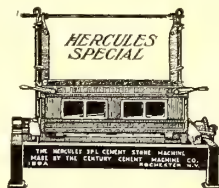


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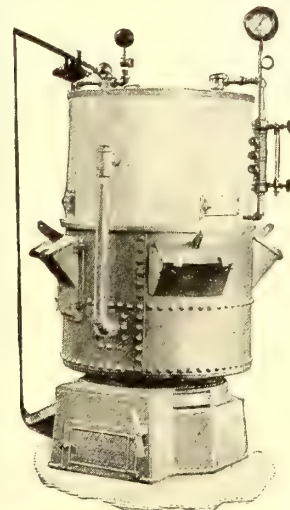
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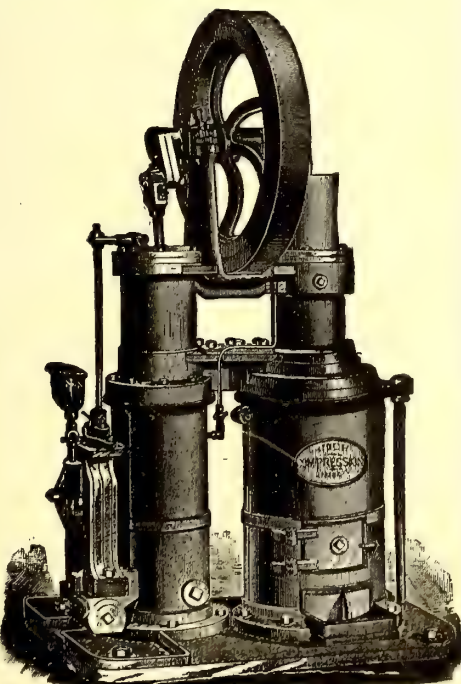
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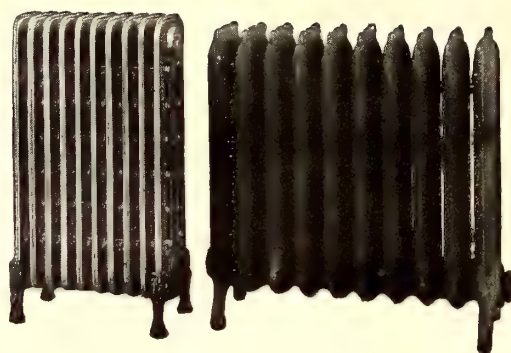
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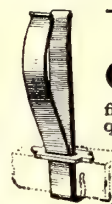
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MORAL FURNITURE

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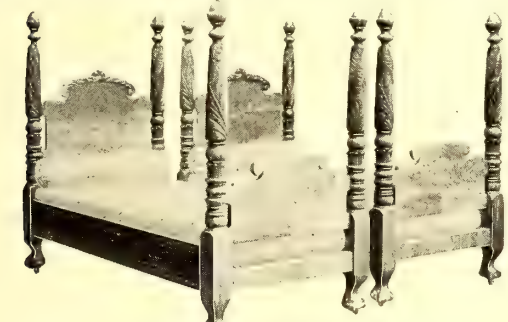
Some of the qualities that make furniture moral, if the term can be accepted, are purity and correctness of design, honest and thorough workmanship, making furniture of character.

The home-maker in selecting furniture wields a great power for good or ill. She becomes responsible for the esthetic and moral development of her children. Unconscious influences are strongest; therefore the importance of good early surroundings can not be overestimated. The demoralizing effects of shoddy furniture are seldom realized during childhood, but they are far reaching nevertheless, and rarely limited to matters of taste.

The world is full of beautiful objects with which to adorn our homes, yet few really beautiful homes exist. Of the reasons for this, two are pre-eminent. First, taste has not kept pace with progress in this country. Second, an erroneous idea prevails that the good is always costly. Yet the good costs less than the monstrosities

in furniture which the home-maker buys because she does not possess the necessary taste, or thinks the kind she wishes is beyond her means. Do not purchase furniture with the present alone in view, for furniture of lasting value we retain for years.

How can we detect the real? Good design is not the only requisite; good material is a necessity, but alone, does not make good furniture. Best material, skilled labor, time, hon-



est construction, and correct design are the factors. A hall-mark or shop-mark, such as the highest grade makers place upon goods, is the manufacturer's guarantee, and it is true that a shop-mark on correct and high-grade furniture enables the public to distinguish the real from the spurious.

Correct reproductions of Period and Colonial furniture come under this class. This kind of furniture was honestly built, and on lines which present designers have not surpassed. It is furniture of character bespeaking honesty in every line, correct in design, admirable in construction, Moral furniture, for its influence is never degrading. If you do not find it at first, defer purchasing, for with it you make your home an object lesson.

This is the kind of furniture to buy. Whatever it is, it must also stand for honest material and construction. For lack of a better term the quality expressed may be truly termed—Furniture Integrity. It is the kind of furniture to place in our dining-rooms, libraries and bedrooms. It may be found at leading furniture dealers in every city. The price is not prohibitive; a pure Colonial sideboard may be had at a cost no greater than the immoral productions of fantastic design.

NOTE.—We are indebted to the Berkey & Gay Furniture Company, of Grand Rapids, Michigan, for the photographs of their furniture shown in this article and also for their charming brochure entitled "Furniture of Character," which treats of correct reproductions of Colonial and Period Furniture. If any should send for this book it is only just to the company that 15 cents in stamps be enclosed to Dept. M, so as not to make the sending of it a burden to them, as it costs double this amount to produce.



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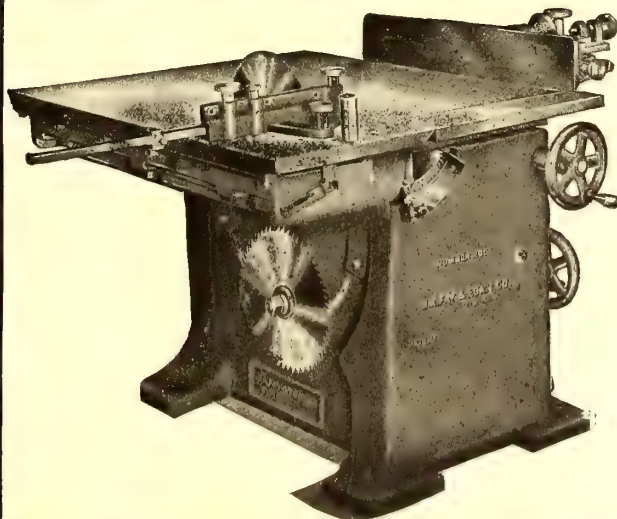
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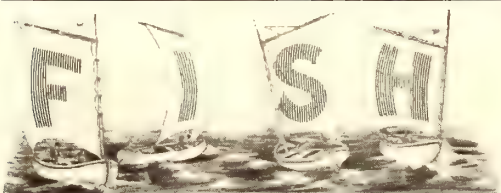
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THE SUBURBAN PEAR TREE

By E. P. Powell

THE pear tree is more vital than the apple tree, outliving it with the same care, so much so that we find trees in Michigan planted by some of the old French settlers as long ago as the founding of Detroit and Philadelphia. Downing describes a pear tree which he knew in Illinois that was ten feet in circumference one foot above the ground and nine feet above the ground was more than two feet in diameter. Its branches extended sixty-nine feet. In 1834 it yielded one hundred and eighty-four bushels, and in 1840 one hundred and forty bushels. These wide-spreading pear trees are admirable for shade as well as for fruit. We have in our popular list for the orchard quite a number that make excellent lawn trees. I am specially fond of a group of buffums, both for shade and for autumn coloring.

The modern evolution of the pear tree began, in the United States, with Marshall P. Wilder, of Boston and Dorchester. His pear orchard, in 1840, contained twenty-five hundred trees, representing eight hundred varieties. At one time he exhibited four hundred and four varieties, and during his life tested twelve hundred. Closely associated with his name must be that of Patrick Barry, of Rochester. The more recent workers have been busy collecting chance seedlings and importing from Europe, especially from lower Russia. Mr. Worden, who gave us the Worden grape, has originated the Worden-Seckel pear, of superb quality; and Mr. S. Fox, of California, has added to our list two or three winter pears of great value—the best of all being Patrick Barry. Among the recent introductions I consider the Fame, the Snyder, the King Karl and the Alamo among the best. The Lincoln Coreless is a worthless affair; but another Lincoln, a very different pear, is an admirable fruit.

We still need a winter pear as good as Nelis and as handsome as Bartlett—a pear that will keep in our bins alongside apples, and ripen up perfectly from March until May. Patrick Barry will meet this need if top grafted, but on its own roots it is a wretched grower. In the Southern States a new breed of pears is being evolved from the Chinese stock. Beside the Kieffer and the LeConte, I find in Florida the Smith, the Stone and the Magnolia, all of them of excellent quality, and adaptable to semi-tropic climate and sandy soil. It is not true, however, that many of our very choicest Northern-grown pears can not be grown in the South, if properly mulched.

A thoroughly good list of pears, considering both tree and fruit, would be Tyson, Wilder, Bartlett and Souvenir Da Congres for summer. For autumn I should select Sheldon, Seckel, Howell, Onondaga and Flemish Beauty. The last named must be very carefully sprayed with Bordeaux, early in the season, or its fruit will crack. The Onondaga can hardly be ranked as the highest in quality, but its growth is superb, and its crop is always clean and abundant. Close after these I would place Frederick Clapp, Hardy, Superfin and Hoosic. For early winter I should prefer Lawrence and Anjou, and for late winter the Josephine. The Lawrence is a straggling tree and short lived; the Anjou is not only one of the most noble of pears, but the tree is perfect in its form and healthy. If this list must be reduced, I should select Tyson and Bartlett, followed by Sheldon and Seckel, and these followed by Anjou and Lawrence.

You can not idealize the shape of a pear tree. No other fruit so varies in the style of growth, from the round-headed Seckel, the

Before putting up this season's screens, remember that it isn't the frame that makes the screen—it's the material within the frame which will spell the difference between comfort and discomfort for you this summer.

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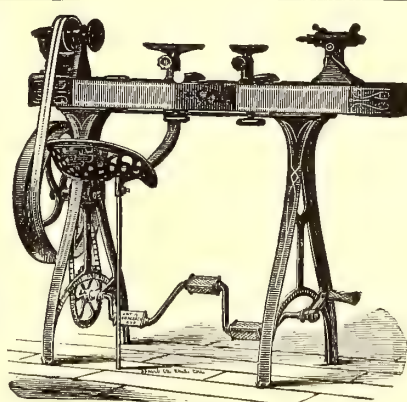
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Pompeian Bronze Wire Cloth is for sale by all leading hardware dealers.

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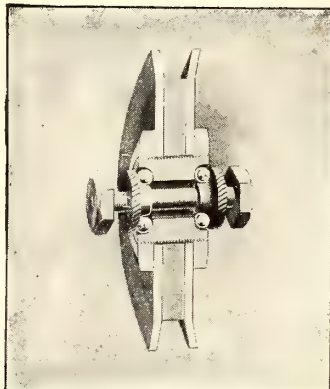
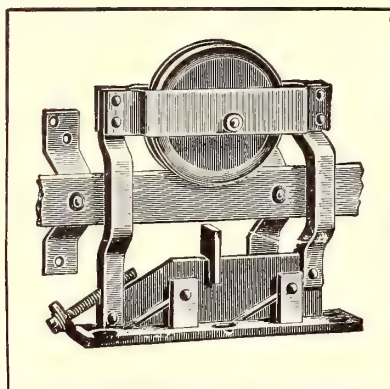
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withy Nelis, the pyramidal Anjou, to the columnal Sheldon, and the Poplar-like Buf-fum. If you follow the directions that are often given, and try to create uniformity, you will ruin your trees. For dwarf I should confine myself to Duchess and Louise Bonne; and even here you can not secure anything like uniform healthy growth. Unfortunately few of our pears are perfect self-pollenizers. Among the poorest are Anjou and Bartlett; among the best are Onondaga and Louise Bonne. There are even widely differing degrees of capacity in trees of the same sort. I have Anjous standing quite isolated, that never fail of fair cropping, while others with good neighbors yield only scattered fruit. I have found no remedy for this difficulty, but to cut out the defective trees.

For market we must have Bartlett; and next after Bartlett the Onondaga. If the trees are to rough it, Louise Bonne is one of the best, and Sheldon one of the poorest. Onondaga also will stand a good deal of neglect. If you have a fence corner for a sprawling tree, you will get extra high quality from winter Nelis. If you want a pear strictly for table use you will get nothing better than these three: Rostiezer, Sheldon and Seckel; but neither of the three make good market pears. The Sheldon is not showy, while Rostiezer is positively unpresentable, and Seckel has lost favor owing to its small size.

There are four or five simple rules for success in pear growing. The first is to grow in sod, but with heavy mulching. This mulching must be occasionally lifted and the soil freed of weeds. I am speaking now, of course, of the suburban home pear tree, not of the market pear grown in orchards. But in all cases mulch heavily. The second rule is, be careful not to force the growth, but give the pear tree just enough food to keep the growth sure and steady. If forced, pear trees crack the bark and are short lived. Kitchen slops make a first rate food, but, of course, must not be allowed to stand in puddles about the trees. My third rule is, thorough trimming. While the tree should be kept free from suckers at all seasons, in the fall new wood should be cut back one-third. I would do this as long as the trees are easily manageable with a step-ladder. The wood that remains is more likely to be ripe and less susceptible to the changes of winter weather. The fourth rule is, to wash the trees occasionally with kerosene emulsion. This is a restorative to old trees, and can be applied with a good deal of strength at least once a month. Now simply add that your pears must in nearly all cases be picked before they are mellow; and some varieties, like Clapp, at least a week before softening, and you have all that needs to be said in order to enjoy this most delicious fruit. The tree, when well grown, is just about large enough for a suburban garden or for a small lawn.

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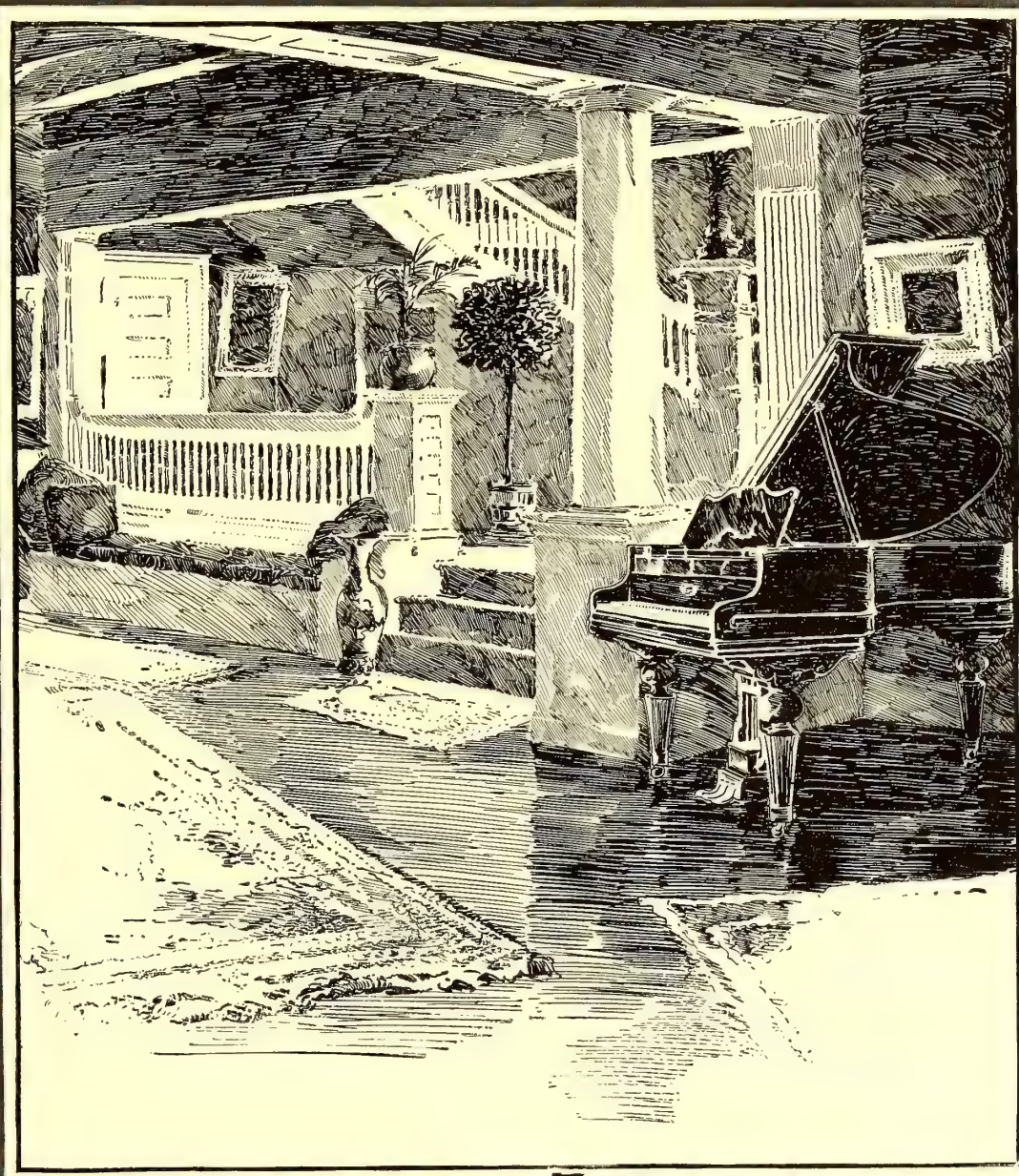
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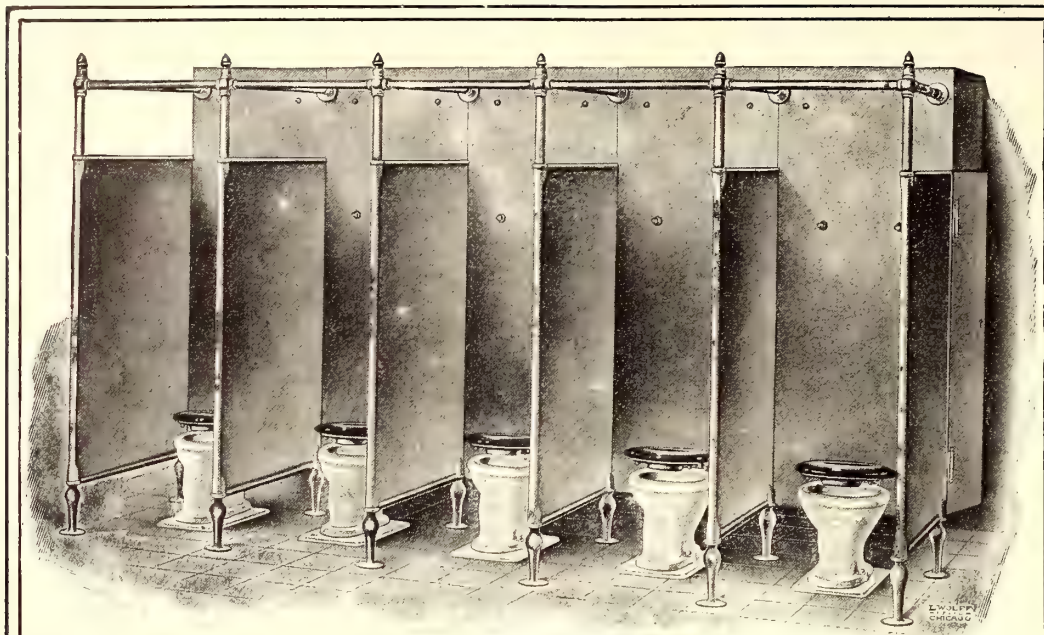


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GARDEN WORK FOR OCTOBER

By Eben E. Rexford

GENERALLY frost will kill the tops of such plants as dahlia, canna and caladium about the first of the month. Soon after this takes place, their roots should be dug and prepared for winter storage. Do this on a warm, sunshiny day. Lift them without breaking, and spread them out on boards in the sun. At night cover with blankets or old carpeting. Next day expose them to the sun again, and keep on doing this until the soil easily crumbles away from them. Then cut off their tops to within a few inches of the root. Store dahlias in a cellar where they will be cool, but not very damp. Some persons winter them on the potato bin; others say they "have no luck" with them if they do not bury them in boxes of sand. I put mine away in baskets, where they will be free from moisture, and have no trouble with them. Many lose their dahlia tubers because they dig them and put them immediately in the cellar. If this is done the roots will be full of moisture, and decay is likely to set in very soon after storage, but if they are left to the action of the sun for several days before being put away, they ripen off and much of the excess moisture is got rid of. If the cellar is damp hang the bunches of roots to the timbers overhead.

Cannas and caladium seem to do best if wrapped in oiled paper and kept in a cool but frost-proof room. Gladioluses I succeed best with if packed away in boxes of bran or sawdust. Keep them where they will be cool, but be sure they do not freeze.

Tuberous begonias and gloxinias will have completed the work of the season by this time very likely. I leave the roots in the pots of earth in which they grew during the summer, but withhold water until the soil is quite dry. Then I set the pots away in a quiet corner, where the temperature is rather low, but even as possible—a closet is a good place if the frost can not get into it—and leave them there until March.

It is not too late to transplant seedlings of perennials if you are careful to take up a good deal of soil with the plants.

Go over the roses and get them ready for winter by cutting out all weak growths, all old wood, and every cane or branch that seems superfluous. The plants should not be covered now. Do that later in the season, when cold weather seems likely to set in. Early covering often does a great deal of harm. But the work of pruning and thinning can be done to better advantage now than later.

It is well to get your material for covering together now. Gather the leaves from the lawn and store them where they will be kept dry. Go over the evergreens and cut away all the branches they can spare, and pile these up for use among the pansies and other plants that require but slight covering. Arrange for litter, straw or whatever you propose to use among the border plants. The work of applying it can be greatly expedited by getting ready in advance.

It is an excellent plan to mark the location of such plants as die entirely away above ground in fall. If this is not done, many of them will be injured when we begin work in the border in spring.

It is too early to put away such plants as fuchsia, hydrangea, hibiscus and others of similar habit, which can be safely wintered in the cellar, but it is not too early to begin getting them ready for winter quarters. Withhold water, so that they will not be encouraged to keep on growing. This will do much to get them into a half-dormant condition before they go into storage. It will also facilitate the rip-

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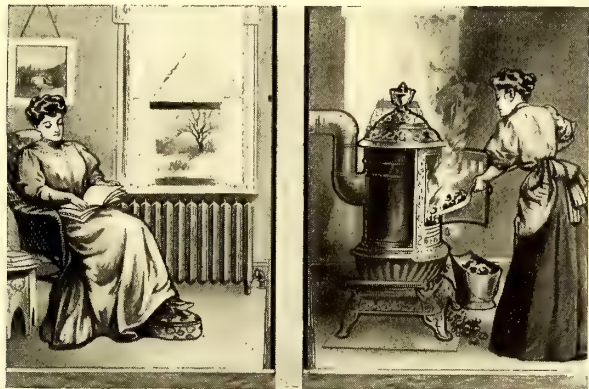
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ening off of the growth of the latter part of the season.

Plants that have recently been brought into the house should be kept away from fire heat as far as possible. Heat stimulates growth, and we do not want these plants to grow until they have adjusted themselves to the new order of things. Give very little water. On no account apply fertilizers. They are in no condition to make use of rich food. Let that wait until they have become well established.

Be on the constant lookout for insects. If any are discovered, wage war against them at once, and do not give up until you have conquered them. Use water liberally, in the form of a spray, being sure to get at both sides of the foliage. This is to prevent the red spider from getting a foothold.

Most likely you potted bulbs intended for winter flowering last month. Pot a few more now, to secure a succession of bloom until late in the season.

Make sure that the plants in hanging pots and baskets get all the water they need. If they get dry at this season, they will be likely to remain in an unsatisfactory condition throughout the winter. A check of any kind at the beginning of the season is most unfortunate.

As soon as the chrysanthemums are past their prime cut away all the old top, and put the plants away in a cool place, where they will not get much water. Leave them there until next month, when they should go into the cellar.

The vegetable garden will be much in evidence now. There will be a good deal of work to be done in it. Beets, parsnips, salsify, and nearly all other vegetables that are to be carried over the winter in the cellar should be dug up and stored away. I have best results in wintering them when I pack the roots in dry sand. This prevents their wilting and enables them to retain their flavor, as they seldom do if left exposed. It also guards against mold in a damp cellar. Perhaps it is too early to put some of these vegetables in storage in localities where cold weather is late in coming, but at the north it is not safe to count on good weather after the end of the present month. And to do good work in vegetable digging and gathering pleasant weather is needed.

Celery can be removed to the cellar any time now. Dig up the plants in such a manner that a good deal of soil adheres to their roots. Set the plants closely together on the cellar bottom or put them on a bed of sphagnum moss. This will retain moisture well, and the successful wintering of celery consists in a large degree in keeping the roots moist and the tops dry.

Onions can be stored in almost any place that is dry and free from frost. Here they will keep much better than in a warm, damp cellar.

If you have a goodly supply of such vegetables as parsnips, salsify, and the like, bury some of them in pits for spring use. Choose a well drained location for your pit, preferably on sloping ground. Make it two or three feet deep, and pack your vegetables away with layers of straw between them. Put straw over the top of them, and finish off with a foot or more of dry earth, which should be covered with something that will shed rain. In such a pit vegetables will keep perfectly, and be as fine in quality and flavor when you take them out in spring as they were when they went into winter quarters. You will never know how superior they are to cellar-wintered vegetables until you have tried pit-wintering.

Spread coarse manure from the barnyard about the asparagus and rhubarb plants. This not so much for protection as for fall feeding

of the roots of the plants to which you apply it. The rain will soak the manurial elements out of the litter and take it down where the roots of the plants can get at it.

Clear away all the rubbish in both vegetable and flower garden. There is no good reason why these places should not look as neat and tidy in winter as in summer.

Gather up the tools and store them in a dry place. Go over the metal parts of them with a good coat of oil to prevent their rusting in winter.

If you have been troubled with worms in the garden, it is a good plan to plow it before winter sets in. Turning up the soil will so expose eggs and larvæ, and many of the creatures that have burrowed away, that comparatively few will survive the freezing to which they will be subjected.

If you keep poultry do not neglect to provide several barrels of road dust for the fowls to wallow in in winter. Now is a good time to gather it if the season has been a dry one.

I would also suggest laying in a stock of good potting-soil. It frequently happens that some of the plants in the window garden require repotting early in spring, and nine times out of ten they do not get the attention they demand because there is nothing at hand to put them in. And, of course, a plant that needs repotting is injured by not receiving the attention it calls for at the right time. Guard against this by storing away a boxful of soil where it can be got at at any time.

THE SANITATION OF THE COUNTRY HOME

By George Ethelbert Walsh

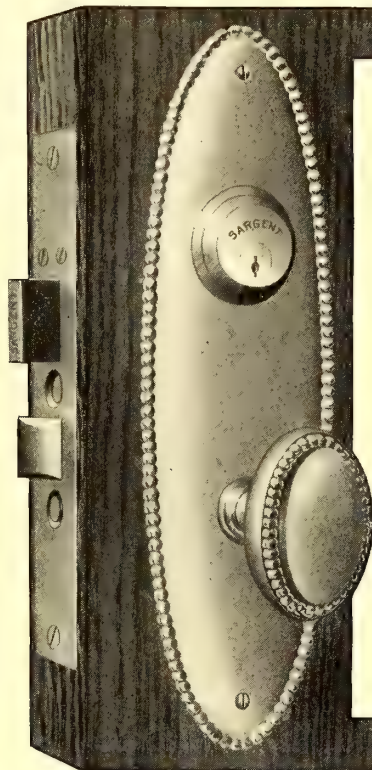
THE proper sanitation of the modern home is a matter which concerns both the architect and owner, but more particularly the latter, who must live in it and rear his family. In the eagerness to build an artistic home within a limited cost, the temptation is strong to sacrifice some of those principles of common sanitation which go so far toward making life a pleasure and joy forever. "The house beautiful" is the popular fetish of the day; some live by it, and others, unfortunately, die as a result of it. External and interior effect must be secured at all hazards. When an enthusiastic client presents to an architect the rough sketches of what she expects in a house, the honest designer invariably shrugs his shoulders and murmurs:

"It can't be done, madame, at that price—not without modifying some important details, such as sanitary plumbing, good cellar, and dampproof walls and foundations."

Then follows a series of compromises, cutting and paring of plans, alterations here and there, and final adjustment of details which may or may not work out as desired. The honest architect, whose reputation is more to him than any immediate want of commissions, will not yield on certain important points. He will insist upon unity and consistency of architectural design, good material and workmanship, and, if he is wise in his day and generation, he will not sacrifice the "healthfulness" of the home for any consideration. But the temptation is strong to place effect above all else.

"What a beautiful house!" are words of honey to the owner of a home when they drop from the lips of a friend or stranger. The final goal of a laudable ambition has been achieved, and one finds unmistakable pleasure in residing in a house thus admired.

The effect of esthetic surroundings of a home is of mental worth. The health is undoubtedly affected by our mental attitude toward the place in which we live. Restful



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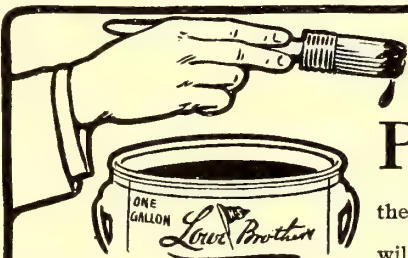
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Details of Building Construction

By CLARENCE A. MARTIN

Assistant Professor, College of Architecture, Cornell University

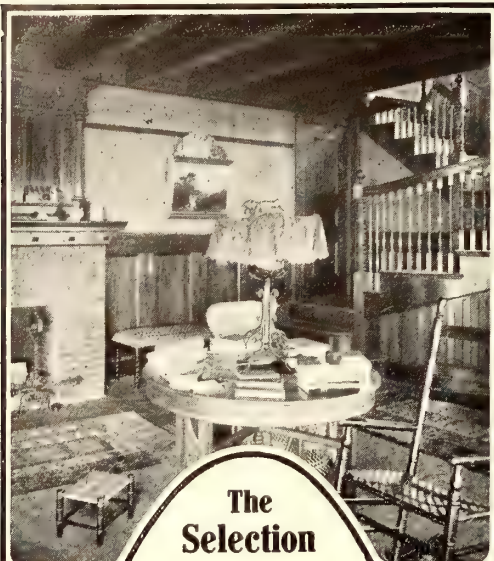
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contentment delivers us from a multitude of evils. For this reason architectural harmony and beauty should be attained if possible, and it is a mistake to be so practical as to overlook the esthetic side of the question.

The plea for homes as sanitary as they are beautiful, however, involves no sacrifice of true architectural proportions and unity of design. On the contrary, the perfectly designed house lends itself more readily to good sanitary conditions than a poorly planned one. It is the obsession, the house overloaded with details, that more frequently proves the most unhealthful for living purposes. In the effort to express some whim or to ape some fashion not consistent with the size and type of house, the worst is achieved.

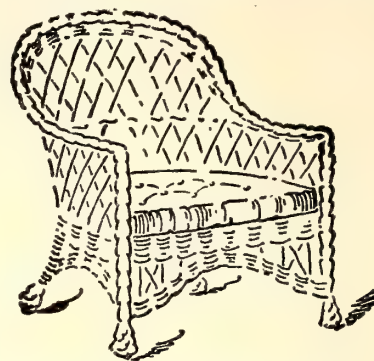
Take the modern bungalow—a type of dwelling which is multiplying rapidly in all parts of the country. The bungalow has its usefulness, and in its proper place it is surpassed by no other type of dwelling. But it can be abused and rendered unfit for habitation and inimical to our health. Originally the bungalow was intended for a warm, dry climate. In California it has reached the highest development, and it is well suited to the climate of that warm region. The true bungalow is a one-story structure, but the name is now sometimes applied to low, rambling two-story structures. Considered as its name originally implied, the bungalow for all-year-round residence in our cold, stormy northern climate is about as unhealthy a structure as one could have erected. The sleeping chambers are all on the ground floor, and in damp weather they are unfit for such use. When a cellar is dug deep enough under the bungalow this fault is somewhat remedied, but even at the best the ground-floor bedrooms will have an unhealthy dampness and moldy smell in wet weather.

The bungalow located on the sands at the seashore for summer use only is a somewhat different proposition. There is perfect drainage around the house, and the summer season is generally far enough advanced to dry out the house before it is occupied by the owner. In California the typical bungalow is rarely wet and damp, but the same can seldom be said of the bungalow in our wet northern States. The construction of the bungalow is primarily made for the sake of cheapness. The cost of running up an extra story in a summer house is considerable. Three rooms can be built as cheaply on a single ground-floor plan as two on a two-story structure. This is the prime consideration in adopting the bungalow type of home.

If a bungalow we must have, let it be built in accordance with common sense principles. There should, first, be excavated a cellar at least three feet deep. This cellar should have ventilation on four sides. It may not be used for storage purposes, but its existence is essential to the health of the occupants. The next step is to run the foundations up at least three or four feet from the ground. These foundations may be of stone, brick, concrete or wood. When the floor is laid it should be of double thickness, with waterproof paper or other material placed between. Then you have a bungalow which will be nearly as free from dampness as this type of house can be made. The cost of digging the cellar will add fifty dollars or more to the cost of the house, and the double floor, with builders' paper between, will require an additional expenditure of fifty dollars or more, depending on the size of the house. But such extra expenditures will repay the owner in the end. Even before these points are considered the building site must be taken into careful consideration. If the drainage is not good, it is the height of folly to build a bungalow. If there is no natural drainage then artificial

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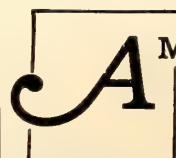


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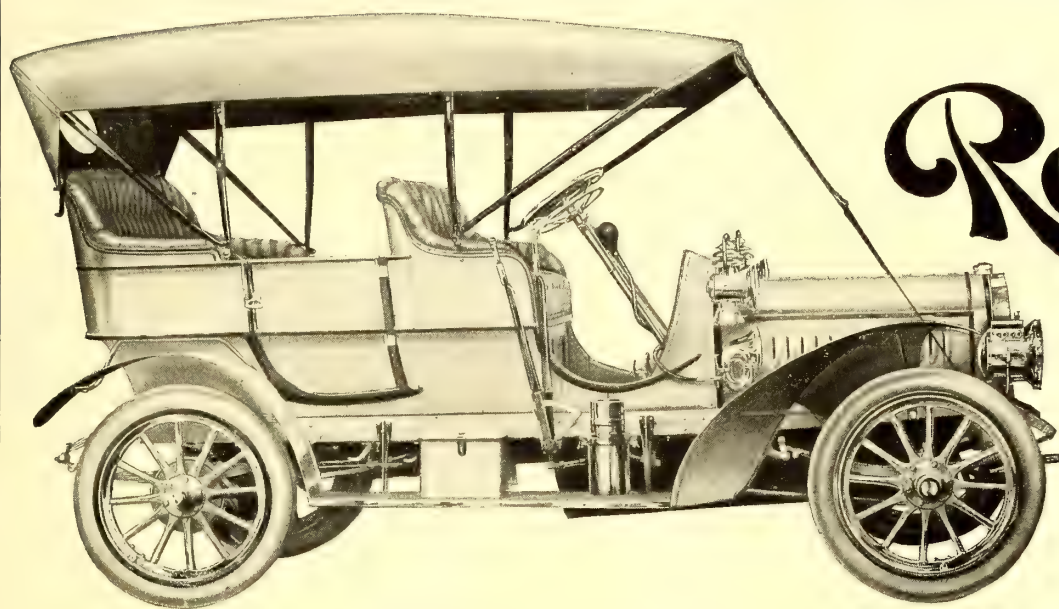
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drainage should be made to carry the water from the house. This can be done by digging ditches from the house site to the lowest level and laying drain pipes in them. A few dollars expended in this way will add immeasurably to the healthfulness of the future residence.

But the bungalow for summer residence is not the only problem in making the house sanitary. Many of our homes built for all-the-year-round occupancy present some doubtful features that our common sense should teach us to avoid. In this type of house the drainage is even more important than in the summer bungalow. The rains and snows of winter settle around the improperly built home and slowly filter through poor foundations into the cellar. A perfectly dry cellar in the country used to be a rarity. It is becoming more common to-day, and architects are solving the problem better every year. Much depends on the character of the soil to begin with. A porous, sandy soil makes the proposition a simple one, but a stiff clay soil brings troubles. Sometimes a hard pan is found a few feet below the surface, and if the cellar excavation goes below this the water which is caught by the hard pan will most naturally flow into the cellar. There is only one absolute way to remedy this. A ditch a foot or two wide should be excavated around the house a foot or two from the foundations, cutting through the hard pan and extending it at least two feet below the cellar floor. Fill this ditch with loose stones, broken bricks or similar material up to a level with the cellar bottom. Then add a layer or two of sand, and finally top off with ordinary soil. The effect of this method of protection will be apparent to any one. The water from the surrounding soil guided by the layer of hard pan will flow into the ditch and sink into the sand and loose stones before it reaches the foundations of the house. If the foundations are of stone or brick properly waterproofed inside or outside the cellar will remain practically dry, even in the wettest weather. The cost of digging such a ditch and filling it with loose material will not be much greater than the expense required for an additional window or extra fancywork in plumbing.

There are many methods of waterproofing cellars, but few of these will answer if the house has "wet feet" most of the time. A substitute for the more expensive method, and suitable for ordinary houses not standing on extremely wet soil, is to run around on the foundation of brick or stones a layer of some very impervious stone or other non-conducting material. This tends to keep the dampness from creeping up the foundation and entering the living part of the house. The liberal use of waterproof paper and paints inside and outside also counteract dampness in houses. The use of hollow concrete and terra cotta blocks for building houses has to some extent inaugurated a reform in this direction. The hollow space inside of the blocks acts as a non-conductor of air and water, and the walls are thus well adapted to keeping the interior from violent atmospheric changes. While many object to using concrete blocks as building material, owing to the similarity of artistic effects, none can refuse to utilize hollow blocks for foundations. Hollow blocks of any material prove good "anti-damp" when put in good solid foundations a few feet above the ground level.

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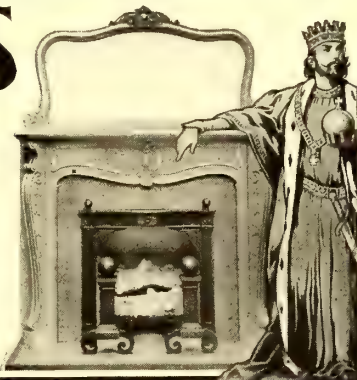
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without windows opening on all sides so the air can circulate through. Small, low windows in a cellar are an abomination. The higher up they can be placed to admit air and sunlight the better will the effect be upon the health of the family. The windows in particular should open on the south and east sides to get the full benefit of the sunlight. A cellar with the sunlight streaming half across it in the morning or midday must possess great advantages over another which has no such admission of sunlight.

The emphasis placed on the importance of securing perfectly dry cellars and living-rooms is not overdone, for half the ills from which we suffer are probably directly or indirectly due to the unsanitary condition of the lower part of the house. Rheumatism, fevers and general debility frequently owe their origin to the dampness of our living quarters. But next to this is the condition of the plumbing. Here, too, there is a common tendency to sacrifice health for appearances. A fancy, showy system of plumbing, including nickel-plated piping and faucets, handsome bowls and basins, and all the little extras which go with it, gives no assurance of immunity from sewer gas and leakages. A poorly installed system of plumbing may give endless trouble and expense, and improper placing of traps and joints may make a pest-house out of a "house beautiful." To many the idea of "open plumbing" means perfectly sanitary plumbing. Nothing could be further from the truth. The only advantage of open plumbing is that any danger point is exposed to view, and it can thus be immediately corrected. A leak can not go on indefinitely without attracting attention. The first essential is, therefore, a properly designed system installed with true regard to sanitary safeguards. The arrangements of traps, bowls and connections should be made so that the flow is all toward the outlet connected with the sewer pipe. Each trap should be sufficiently deep to make the inflow of gas absolutely impossible. A diagram of the plumbing system should be submitted to the owner before the contract is signed, and then a little study of it will convince even an amateur of the value of a perfect installation. In addition to this, both the water and smoke test should be insisted upon before acceptance of the work. The water test is generally made before the bowls are put in position, and is intended to test joints. When all the fixtures are put in position the smoke test should be applied to see if any leaks are apparent in any part of the house. In wiping joints often slight pinhole leaks are left, and these can only be discovered by the smoke test. The best plumbers will apply these two tests for their own satisfaction, but it is well to see that they are attended to. If necessary, a provision to this effect should be inserted in the contract.

The heating and ventilation of the modern house are special matters of the utmost importance. With the introduction of steam and hot water heating there has disappeared the old-fashioned open grate in many houses. The abolishment of the latter has increased the difficulty of perfect ventilation. The vitiated air of our living-rooms formerly had a good outlet up the open grates to the chimneys, and all that was necessary to keep the atmosphere in good condition was to admit fresh outside air by door or window. Now we may admit pure outside air, but unless we provide an outlet for the impure air we do not get good ventilation. There must be some method of escape for the air which we have breathed. An open transom over a window may do this, but many have permanent ventilators installed above the windows in each room. These ventilators are made inconspicuous and form a part of the wall decora-

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tion. The escape of the foul air through them will be an important improvement in the design and construction of the modern home. The theory which must be kept clearly in mind is that fresh air must be admitted, and then some outlet for the vitiated air provided. This means a circulation of air, while ordinarily there is no such thing as air circulation in the house.

We hear much about overheating of our homes, and the dangers of steam heat, but it should be remembered that many of the troubles attributed to these are in fact due to imperfect circulation of air. If we obtain this, steam heat will be robbed of half its evils. But confine the air in a room, and heat it to a high temperature with steam, and we have just the right conditions for producing colds and pneumonia. Overheating is less threatening to the private house than to the apartment. One can control and regulate the former to suit the needs, and besides there is always direct outside air to be admitted.

A simple method of overcoming any tendency to overheating, and at the same time to keep up a good circulation of air, is to have two or three one-inch holes cut through the walls just below a window and similar ones above the window casement. These holes should have little valves to close them at will. The air admitted in the lower holes can then be regulated in the coldest weather without opening the windows, and the foul air will escape through the upper holes. It is a provision which can be made in any house at little expense, and without disfiguring the windows or the wall ornaments. In the end it will add greatly to the comfort and health of the occupants, warding off ills which now beset those who live in poorly ventilated houses.

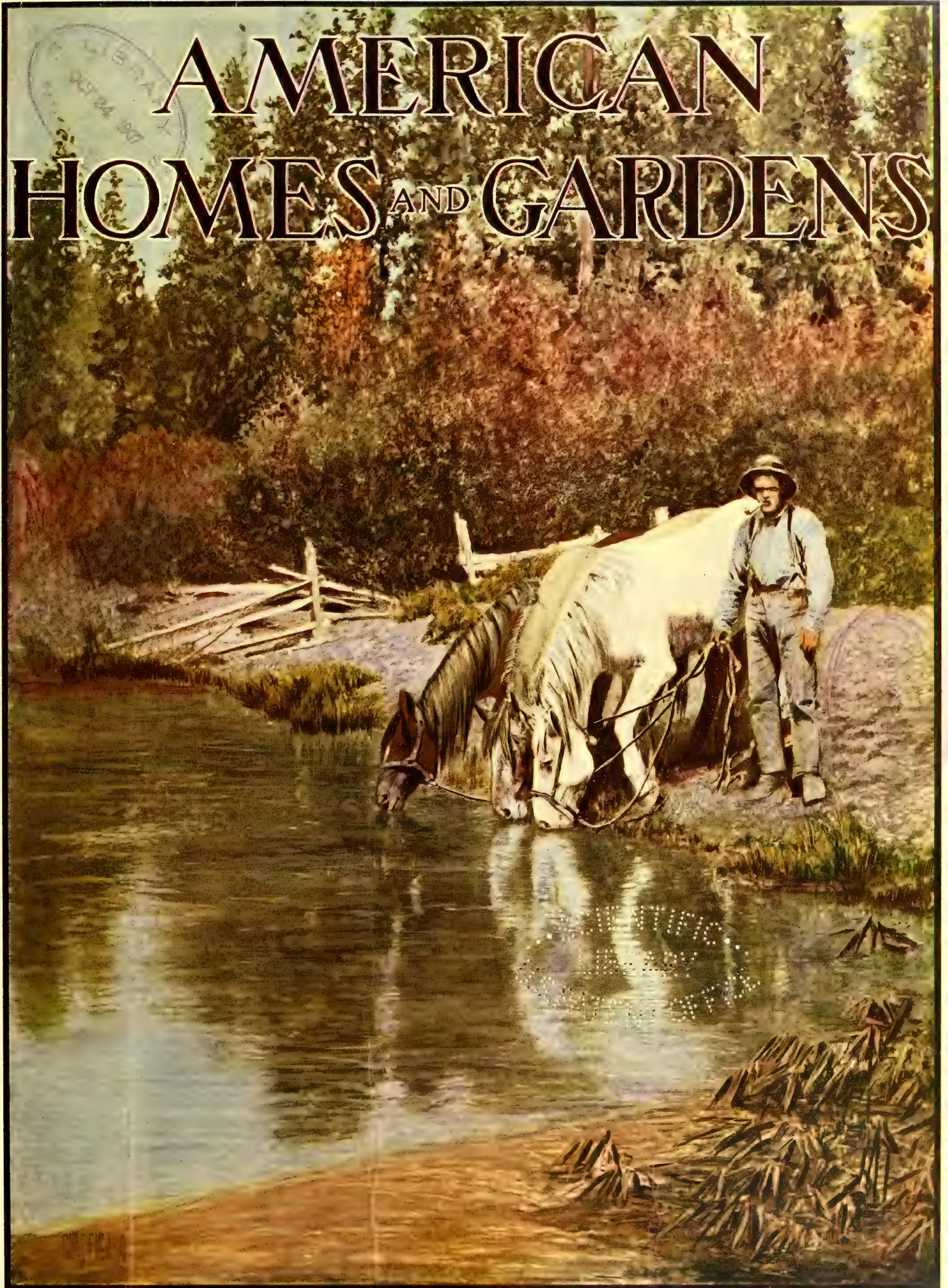
NEW BOOKS

SANITATION IN THE MODERN HOME. Edited by Jno. K. Allen. Chicago: Domestic Engineering. 1907. Pp. 271. Price, postpaid, \$2.00.

A book on sanitation without illustrations is somewhat of a novelty in these days of weighty technical treatises; but as a matter of fact sanitary illustrations are chiefly of value to the specialist, whereas the present book is intended for the non-technical reader, and has special reference to the study of matters connected with the house that the home builder should give before he seeks the assistance of the architect. It is, therefore, a book intended to reach a class of readers who would neither value nor understand technical illustrations, but who will find in its compact pages the compact information they need. Mr. Allen has prepared his book with care; he has shorn his pages of technicalities as far as it was possible to do so, and he has produced a handbook of unusual practicability and value.

FOUR SEASONS IN THE GARDEN. By Eben E. Rexford. Philadelphia and London: J. B. Lippincott Co. 1907. Pp. 307. Price, \$1.50 net.

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The Entrance Door of "Westover" on the James River

AMERICAN HOMES AND GARDENS



Volume IV

November, 1907

Number 11



"Brick House"—The Belvedere Over the Water Is Approached by a Brick Path Bordered with Evergreens

Monthly Comment



NEWCOMERS to the country side are about to be put to heavy test. The calendar is no longer necessary as an indicator of the season of the year, for the signs of fall and the rapidly approaching winter are visible everywhere. Very few persons make arrangements to live in the country in the winter months, and the first cold season brings such a host of changes and so many unexpected discomforts and inconveniences that even the most valorous are apt to be perturbed. But the country home that was purchased with so much glee earlier in the year can neither be neglected nor vacated at a mere whim. It is a well established fact that just as winters come, just as certainly they will go, and it is equally well known that very many people survive their cold with equanimity and emerge from their winter's trials with great gusto in the spring thaws. The newcomer, therefore, instead of being discouraged should try to get as much enjoyment out of a country winter as he had out of the summer. It will not be the same kind of joy, but there is lots of pleasure in it if one but attacks it in the right way.

THE winter is an excellent season in which to become acquainted with one's house. One never knows a house until one has lived in it for several years. Like persons, houses improve or become worse on acquaintance. The more one knows them, the better one is acquainted with them; the more completely one is familiar with them, the better one likes them—or hates them. The former state is greatly to be preferred, for a house that one dislikes is often exceedingly difficult to get rid of; and no one, of course, wishes to get rid of a house at a loss if it can be helped. The truly fortunate folk are those who love their houses, love their environment, are satisfied with their geographical and climatic situation, and have no quarrels with their neighbors. In the happy summer time one lives out of doors as much as possible. In the winter the process is apt to be reversed, and not always with advantage to one's health. But at least winter is the season for the inside of the house, exactly as the summer is the season for without it.

WINTER, then, brings out the full test of the value of the house to its occupants. Is it easy to heat, and without too great an expense? are the questions first asked, only to be immediately followed with reflections on the water supply and the non-bursting qualities of the plumbing. Of course there are a few other things: Will the roof leak? How is the cellar? Is the living-room cold, and can the bedrooms be readily ventilated? Any house owner will tell you there is a lot to learn about a house, especially in winter, and the time to make its acquaintance is close at hand, just out of doors, and ready without any inconvenience. As a matter of fact, not until next spring, with all hands passing through the winter without harm, can one draw a full breath of relief and contentment. The winter is the real test of the house.

THE great attention given to the building, arrangement and furnishing of the servants' quarters in many modern houses is, in many respects, an admission of the great difficulties attending the modern servant problem. It is not all pure humanitarianism, much as this is preached in the house books and magazines. The fact is, the servant question has long since become acute in America, as might naturally have

been expected to happen in the land of the free and the equal. Hence it has come about that the servants' rooms in large houses are almost as good as those of the owner, and very many times better than their natural occupants were accustomed to in their native habitat. A good deal of this improvement has been for the better. The little crowded, hot, unpleasant rooms once set aside for the help were, in many cases, unfit for human occupancy. It is an advance, and a decided one, that such rooms are no longer put to habitable use, and it is an excellent thing that good rooms for servants are now provided everywhere. But it is quite a significant fact that with all this betterment there has been no lessening of the difficulties of the servant problem. These people are just as hard to get as they ever were, and are much more difficult to retain. On this aspect of the question absolutely no progress appears to have been made.

ECONOMIC philosophers, seeking for interesting topics for learned dissertations, sometimes fall afoul of the subject of household expenses. And in truth it is a fascinating subject of the very widest interest. To know how much other people spend and what they get for their money easily surpasses every other kind of gossip. That much of this talk is necessarily impersonal and is concerned with people one does not know, deprives it of the real interest it might otherwise have. And incidentally it deprives most of these investigations of their real point and value. For the real test of housekeeping, or of home life—to use a better phrase—is what one gets for one's money. A person who spends five hundred dollars a year for certain expenses may actually not obtain as much as one who spends half that amount. For figures are devoid of the personal touch. They tell us nothing of the people concerned. They give no information as to the personality, the tastes, the individuality of those under review. In short, they leave out the person who supplies the money, the person who spends it, the persons who are benefited by it. And the personal element is the vital part.

HENCE such discussions are generally without point. They tell nothing of the conditions. Because a certain family in an unnamed city can support itself in what, to its members, is abounding comfort on eighteen hundred dollars per year, is no reason why other folk, having the same money to spend, and having no more expensive ideas, can do likewise. It is interesting to know that certain comforts and luxuries can be obtained for a given sum, but it is quite absurd to suppose that others can duplicate that success and do it happily. For happiness, after all, is the true measure of human success and of human joy in living. The real problem is not to spend as little as one can or to get along on as small amounts as possible; but, for a given sum, to obtain the greatest amount of satisfaction. One may buy more for one hundred dollars than for ten dollars; but it does not follow that for the larger sum the buyer will obtain ten times as much satisfaction as for the lesser. On the contrary, there is a great army of householders and heads of families in America, and even in other parts of the world, who will solemnly assure the inquirer, if he be so bold as to put the question, that the more he has the less he gets. And the statement is not in the least paradoxical; for it is but the simple truth that the more one buys the more one wants to buy. Increased income seldom means greater savings, but rather greater expenditure, which increases day by day and in a much greater ratio than the income.

Notable American Homes

By Barr Ferree

"Brick House," the Home of Anson Phelps Stokes, Esq., Noroton, Connecticut

"BRICK HOUSE" is built at the end of a fine country road on the extreme end of Colclender's Point. It stands on a narrow tongue of land, washed on three sides by the waters of Long Island Sound. Its stately outlines loom attractively among the trees which, just without the borders of its territory, grow luxuriantly on each side of the road. The entrance gateway admits to an open court, low-walled with brick, with gateways to the right and left, while a fourth stands at the head of the avenue, which runs straight on to the house. This is a broad and spacious roadway, bordered with a wide band of sward on either side, in which grows pyramids of box; then a path, and beyond, lawns and shrubbery and trees, all beautifully planted and kept in the finest condition. A tall iron railing, supported by piers of brick, marks the limit of the avenue and forms the outer boundary of the forecourt before the house. Within and without it is banked with shrubs and flowering plants; great pottery jars are filled with plants and vines; bay trees, and other ornamental shrubs grow in boxes and tubs; and on the right is a wall fountain beneath a window.

The house is H-shaped, with an open forecourt toward the avenue, partly inclosed on the sides by the wings, and partly by the iron railing, which is brought forward to give greater space. The brickwork throughout is red and black and the trimmings white. The center of the entrance front is brought slightly forward, and has a pediment supported by four Corinthian pilasters. Although eminently simple and restrained, this device is the chief decorative feature of the front. The other elements are briefly described: large round arched windows in the first story; simple rectangular windows in the second; a plain but sufficient cornice; and then the high shingled roof in which are modest dormers, arranged singly and in pairs.

The water front is quite as simple but necessarily very different in design, although in entire harmony with the other parts. The house wall here presents a straight unbroken line. Below, on either side, but brought in from the wall ends, is a porch, almost square in form, supported by clustered columns. Large round arched windows are beyond and between them; while within are recesses which extend to the main cornice above the second story. The upper windows are singles or groups, and the cornice, roof and dormers are identical with those on the entrance front. At the base is a terrace, inclosed within a balustrade. The sides are less formal in treatment than either of the two main fronts. The distinguishing feature of these lesser fronts is the great brick gable, which also surmounts the end walls of the wings on the entrance front. The roof is high pitched, and the gables rise to a height of quite two stories. East and west they are capped by two chimneys; on the entrance wings by one. The terrace of the water front is continued below the west side, but on the east the road is dropped to give entrance to the kitchen, which is in the basement of this wing.

The distinguishing qualities of this house are its solidity and its simplicity. It is a house of large size, designed and built in a large way; this is completely true notwithstanding the fact that its great size is not immediately apparent. It is not, indeed, until the house has been viewed from every aspect that its great magnitude is thoroughly realized. The length of the entrance front is, of course, broken by the wings which form a part of it; but the water front presents a great length of line whose dimension is not broken by the porches and the recesses, but rather increased by them; for standing beneath them one realizes their considerable size, although they occupy but a portion of its length. The great height of the gable ends also adds to the effect of size, as they tower high above one on the terrace, and seen from the road of the kitchen entrance have a truly vast height. That,



A Finely Planted Driveway Leads Directly to the Entrance Front



The Water Front Is Supported by a Balustraded Terrace Behind Which Rise Two Spacious Porches

indeed, is the point at which the real immensity of the house is most realized.

And the artistic qualities of the house are quite as notable as its dimensions. Its architects, Messrs. Howells and Stokes, of New York, have handled their subject with great skill. Their obvious aim was to build a large house simply and well, and at the same time give it an interesting architectural expression. Their success is amply testified to by the illustrations; but it should, perhaps, be pointed out that the artistic success of this house is purely architectural, or that of building, if a more comprehensive word be desired. Of ornamental features as ordinarily considered there is scarce anything at all, nothing, in short, but the great pilasters of the entrance pediment. The windows are without external frames, the large ones being sunk within unprojected arches of brick. It is true that some of these have inner architectural frames, but the carved ornament is of the rarest sort. There is no breaking up of the wall surface anywhere, the simple bay windows on the sides, the quoining of the walls corners, the plain pilasters on either side of the water front porches, are hardly more than the simplest of architectural devices, and give mobility to the wall surfaces rather than diversify it.

Yet with all it is a thoroughly artistic house. If its walls are plain and its ornamentation slight, it is not without interest. On the contrary, it possesses interest of a very high order, the interest of good architecture, well applied, skillfully combined, and detailed in a thoroughly workmanlike manner. It is a house beautifully adapted to its situation directly upon the water, and, as we shall immediately see, quite as beautifully adapted to the demands made upon its interior.

A short flight of steps conducts one to the entrance doorway, by which one is immediately ushered into the main hall. This is a beautiful apartment running the full length of the house from the center of each wing, where it is joined to passages and alcoves at either end. The prevailing colors are green and white, colors which are given to most of the

rooms on the ground floor, but quite varied in their combinations and thoroughly individual in each apartment. The hall has a high wainscot of paneled wood, painted white, with Ionic pilasters on each side of the central door and columns of the same fine order at the ends. The plainly detailed cornice is white, as is the ceiling. The latter is perfectly plain except for the encased rafters which divide it into panels, and which are supported by the pilasters and columns. The walls above the wainscot are covered with paper in two rich shades of green, and on it are hung family portraits in gilded frames. The hardwood floor is covered with green rugs—plain centers and simple borders. The window curtains are of two shades of green, and at the central doorway, which leads to the living-room, are portieres of green and white. Along each wall is stood a fine collection of old furniture, many of the pieces being richly carved, and all of great artistic interest.

Beyond the columns to the right is a fireplace and mantel. This is of wood, painted white, with facings of mottled green marble. This space serves as an anti-chamber to the stairhall, which is at right angles to the main hall, and is thus completely hidden from the entrance doorway. Its decorative treatment is identical with that of the main hall, save that the walls around the stairs are completely paneled in wood above the wainscot. The balusters are of a delicate Colonial design and the handrail of mahogany.

The living-room occupies the whole of the center of the house. The main door is directly opposite the entrance doorway of the hall. On either side is an old Italian alabaster column, very slender in design, now converted into an electric light standard. The floor is two steps below the level of the main hall, and standing on them, within the room, one on each side, is a brass church candlestick. The hardwood floor is laid in small squares, and is covered with three large green rugs, with plain centers and simple borders. There is a shallow baseboard around the foot of the walls, which are faced with green striped paper in two shades. There are columns and pilasters on each side of the entrance door, and

the ceiling is beamed in white plaster. At each end is a fireplace, the chimneys being treated in an ornamental manner with doubled pilasters that support the main cornice. The fireplaces, like all in the house, have brass fixtures, and the mantels are of wood painted white; the facings are of dark mottled green marble. The large windows on the water-front have semicircular tops, and the curtains are of cream-colored silk with soft-colored flowers. The furniture is both old and new, the large size of many of the pieces being admirably adapted to the vast space of the immense room.

The dining-room is at the left end of the house, its windows overlooking the Sound on two sides. The walls are paneled in wood, painted white, from floor to ceiling. They are surmounted by a very delicately detailed cornice. The ceiling is plain white plaster. The hardwood floor is covered with an Oriental rug in soft colors. The Colonial mantel, of wood, has two small columns on each side supporting the cornice, while a shorter pair carry the mantelshelf. The facings are of yellow mottled marble. On each side is a slender silver column supporting a silver flower vase. The mahogany furniture, which has seats of dark red leather, is Chippendale. At the front of the room are two corner china closets, and over one of the sideboards is a rich piece of tapestry. The room is lighted by reflectors hanging above the portraits with which the walls are hung. The window curtains are of red velvet with white sash curtains.

A door from the dining-room leads to the pantry. It has a tiled floor and the walls are almost surrounded by hardwood cases that extend to the lofty ceiling. Beyond is a small breakfast-room in blue, and down an adjoining corridor are rooms for the men servants. The kitchen, servants' dining-room, laundry and similar essentials are in the basement below.

Adjoining the dining-room is the smoking-room. It is really a recess in the hall, and occupies the space that at the other end of the house is taken up by the stair hall. There is a hardwood floor with Oriental rugs of reddish tone. The mantel is of white wood with facings of mottled green marble. The curtains are green and white. Distinctive character is given to this apartment by the furniture, which is of teak wood, very elaborately carved and highly interesting examples of this style.

The right wing at the west end of the house is occupied by several rooms, of somewhat less size than those elsewhere on this floor, but none the less important because of this. They include the reception-room, library, the billiard-room and two bachelors' bedrooms. The latter are pleasant apartments, papered in green of different design but admirably harmonized with each other.

The reception-room is at one side of the west entrance. It has a hardwood floor with a green rug. The walls are paneled throughout in wood painted white, with large panels above small ones. There is a detailed cornice and plain white ceiling. The mantel is of wood, the curtains of salmon damask and furniture Dutch inlaid.

The billiard-room adjoins the reception-room. It, too, has a hardwood floor, with a rug of red brown, which is the prevailing color. The walls have a high oak wainscot and are covered above with a red floral paper. The mantel is of black marble. The furniture is covered with reddish brown leather. The chandelier over the billiard-table carries four lights with green glass shades.

The library is, in every sense, a library. Three of its walls are entirely incased with book shelves behind glass doors. The woodwork is very dark in color, giving a rich effect. The center of the rug is blue, with a red and blue border. The curtains likewise are red and blue. The wall



The Stairs Occupy a Separate Hall Adjoining the Main Hall



The White Paneled Walls of the Dining-room Are Hung with Family Portraits, with a Fine Tapestry at One End



The Spacious Living-room Occupies the Whole of the Center of the House; the Columns and Pilasters Are White, the Walls Have Green Stripes of two Shades



The Main Hall Is a Beautiful Apartment Running the Full Length of the House ; the Prevailing Colors Are Green and White



The Dark Woodwork of the Library Gives a Rich Tone to this Splendid Room ; the Curtains, Furniture and Rug Are Red and Blue

without bookshelves is paneled throughout and contains the fireplace. In the center of the room is a massive and richly carved table. Behind it is a carved wood chair. The other furniture is red and blue.

Of the grounds surrounding the house it is impossible to speak save in a most enthusiastic manner. That it is built at the end of Collender's Point has already been stated, but this mere statement conveys nothing of the great beauty of the surroundings or of the really remarkable nature of the site the owner of this property has obtained. Without the house, toward the water, is an immense semi-circular lawn. The house stands upon the diameter of the semicircle, which has been raised somewhat toward the water, where it is supported by a retaining wall, which, however, is not seen from above. Across the Sound is the shadowy outline of

trees, tubs of hydrangeas and other stately plants, giving welcome notes of color and rich growths of foliage.

On the entrance side the planting and arrangement is equally fine. Here are thick clumps of shrubbery, hedges of



The Water Front Terrace and One of Its Porches

Long Island. Oyster Bay is nine miles away to the right; Huntington is to the left. These are mere names, however, for Long Island is too far away to be distinctly visible.

The landscape treatment of the place has been carried out with fine taste. Many of the trees, and of course all the shrubs, are newly planted, but have already passed beyond their first growth and their rich luxuriance give delightful promise of superb maturity. Below the terrace that surrounds the house on two sides is a rich planting of herbaceous and other shrubs, giving fine notes of foliage and bloom. The broad terrace is spaciouly pathed with brick, with borders of grass. At the east the path runs straight out to a summer house built on the most exposed point of the property. Here, on either side, are the pyramids of box which were a feature of the entrance driveway. And everywhere, where emphasis is needed, are boxed bay



The Return of the Terrace on the Side of the House

lofty poplars, groups of young trees and masses of foliage and bloom. To the left, as you enter the grounds, is the stable. This is a handsome and commodious structure with a lofty central pediment on the avenue front. It has an interior court, open on the inner side and a cottage for coachmen and men. On the right of the drive, but at right angles to it, is the conservatory. This handsome building has a large central dome, and is flanked by two structures in brick: that toward the avenue is the gardener's house; the further end is utilized as a potting room and acetelyne house, the latter gas being used as supplementary to the electricity with which "Brick House" is lighted. The mechanical equipment is as ample as the artistic care given every detail.



The Stable Has a Pedimented Center Facing the Entrance Drive

A Small Successful Summer Home

By John Maylor



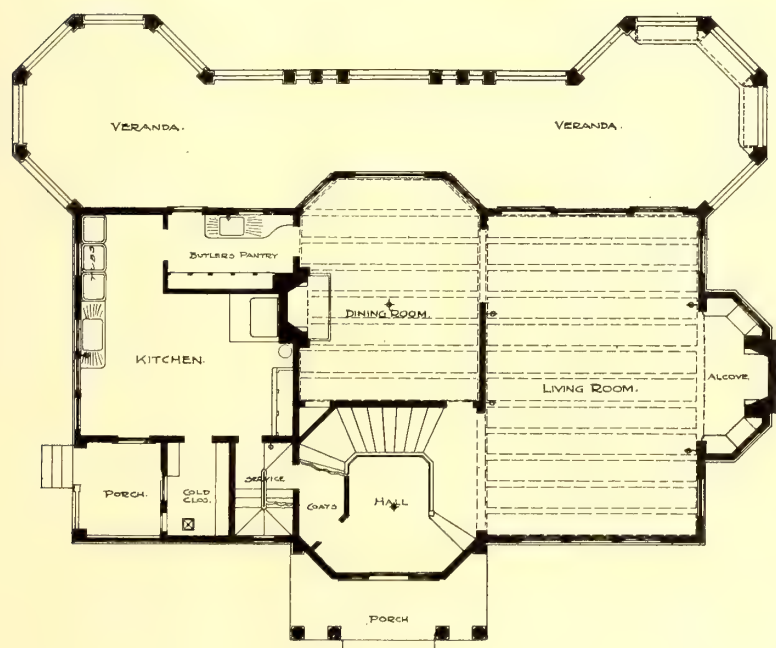
HE summer house of Mrs. L. Anna Erbacher shows what can be done in building a small summer house by the seashore, without following any particular style of architecture yet with a distinctive character sufficient to present a charming home.

The house is situated at Water Witch, N. J., which is a great park of many acres resting on the crest of a rugged hill top known as the "Highlands," from which broad views are obtained of the lower New York Bay and the Atlantic Ocean. The site affords ample opportunity

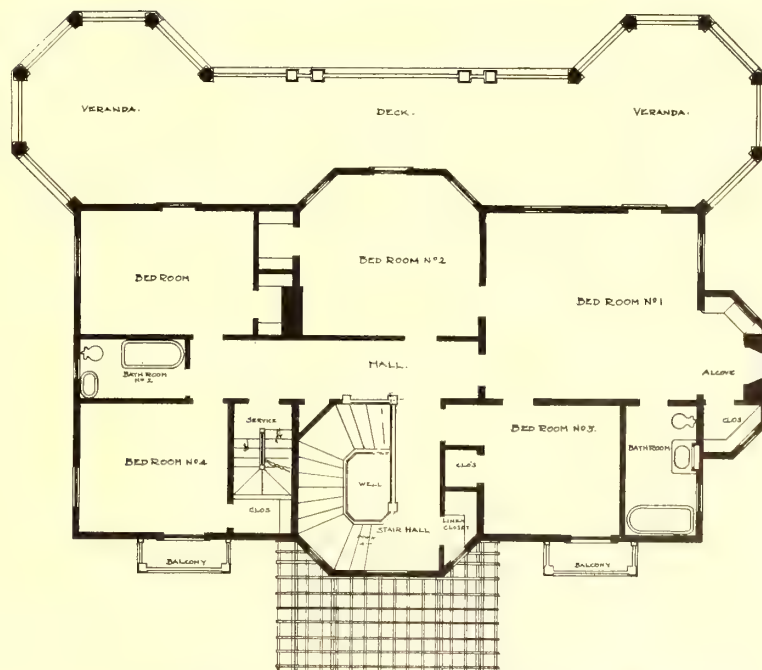
for special development, and the design shows an admirable regularity of form, which is reflected in the plan and interior arrangements. The detail is refined, and the whole general scheme presents that characteristic of simplicity which is so delightful in a summer house. While we are building to-day of every conceivable material, we have learned to confine these materials to a certain standard of excellence in the designing of our houses, and in this particular case, Messrs. Hill and Stout, who were the architects of the house, have adopted a scheme which gives the greatest amount of light and ventilation, and an arrangement of rooms with an open-



The "Double Decker" Veranda Is a Conspicuous Feature of this House



PLAN OF FIRST FLOOR



PLAN OF SECOND FLOOR



A Delicate Shade of Apple Green and White Trim Form the Color Scheme of the Living-room

ond story, upon the second landing of which is placed a grandfather's clock of antique character.

A broad arch opens into the living room, which extends the full depth of the house. The color scheme throughout is a delicate shade of apple green, with walls and rugs in harmony, and a white painted trim. Furniture of antique pattern is placed gracefully about the rooms, and the one tone of green is relieved by the cretonne coverings of the furniture, which are of a dull shade of green and red. The ceiling is beamed and is treated with ivory-white paint. An inglenook is thrown out at one side of the room, containing a large open fireplace, built of buff brick, with facings of similar brick rising up to the ceiling. A wooden shelf, supported on corbelled brackets, forms the

ness one with another, as far as practicable, and which is apparent immediately upon entering.

The principal feature of a summer house is the veranda, and here we have a "double decker," which is well fitted up for living and dining uses.

The material selected for the underpinning is red brick laid in white mortar, while white cedar shingles left to finish in their natural state, and ivory-white pine trimmings, are the materials used for covering the building paper and matched sheathing with which the exterior framework is inclosed. The outlines of the building are well broken by the numerous bay windows, and the brick chimney of simple construction.

The entrance is from a porch placed in the center of the front, with columns and a roof covering designed with a pergola effect. The front door, of Dutch pattern, permits of the upper half being swung open when desired without the necessity of opening the entire door, the lower half remaining closed.

The hall is octagonal in plan, and has apple-green tinted walls, harmonizing with the ivory-white painted trim. An attractive staircase with ivory-white painted treads, risers and balusters, and a mahogany rail rises to the sec-

mantelshelf. Paneled seats are placed at either side of the fireplace, above which are windows for light and ventilation. The floor of the entire inglenook is paved with buff tile. Opening from the living-room, by a broad arch, is the dining-room, provided with a high paneled wainscoting finished with a plate rack, above which the walls are covered with a tapestry effect in the design of fruits and flowers. A fireplace, with facings and hearth of cream-white brick, and a



The Dining-room Is Paneled and Has a Tapestry Frieze



The Octagonal Hall Contains an Attractive Staircase

mantel and paneled over-mantel, completes this room. Mahogany furniture of good style is used. French windows in both the living- and dining-rooms open onto the veranda.

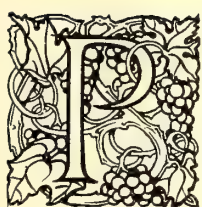
The butler's pantry is fitted with a sink, dresser and closets complete. The outdoor dining-room, which is becoming an important feature of the modern American home, is reached from the butler's pantry as well as from the rest of the house by the way of the veranda. Having this con-

nection with the butler's pantry, service may be had with as equally good results as with the dining-room itself. This is a very important and excellent feature to be considered in the planning of a house. This outdoor dining-room is provided with a green wicker table and chairs resting on a red and green rug, and the tone of color presents a refreshing and cooling effect.

The kitchen is well supplied with the usual sink, laundry tubs, dresser, cold storage room, and a service stairway connects with the cellar and upper floors.

The second floor contains five bedrooms and two bathrooms. The bedrooms have white painted trim, and the wall of each room is carried out in one particular color scheme. The bathrooms have tiled floors and wainscotings, and each is furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains the servants' bedrooms and ample storage space. A heating apparatus and fuel rooms are in the cellar. In the treatment of this house the architect has seized upon the opportunity of giving it an individuality and distinctive character. It is a house that attracts by its real comfort and the thorough excellence of its parts and its furnishings.

Materials for Wall Coverings



PAPER is most frequently used, partly because it is the cheapest material, partly because it can be had in a vast array of patterns, and partly because, of its cheapness, it can be removed and replaced at small cost.

There is a host of wall coverings offered by the shops: paper, denim, cretonne, silk, fabrics into which silk enters, leather, tapestry, and imitation goods of almost every possible sort, which pretend to be what they are not, and carry out their imitation so successfully that sometimes the expert is deceived. The range of choice is very wide, and the chief limit is the size of one's pocketbook.

When the choosing of the wall covering has advanced to the selection of the material the time for definite choice has arrived. Every one who has tried this knows how difficult it is. Sheet after sheet, roll after roll, is passed in rapid review, with the chief apparent purpose of confusing the mind and postponing decision. But the work must be done, and the single aid that general advice can give is to point out general principles, and indicate what should be excluded or what is suitable for certain conditions.

In papers the range of choice is extraordinarily wide, from the simple inexpensive American papers—and very taking many of them are!—to the costly designs of French and

English draftsmen, with Morris and Day at their head. It is the high grade foreign papers that are most apt to reach American markets, and many of them are not only singularly attractive, but works of extreme beauty. The complicated designs of the masters of wall papers are only suited to separate use; they are strong and vigorous patterns, requiring no help from pictures, and almost completely furnishing a room in themselves.

Very attractive rooms are now covered with silk and allied materials. These goods come in very delicate patterns, a circumstance to which they doubtless chiefly owe their popularity. Not quite the same effect would be produced were these designs translated into paper, for the material has a direct relationship to the design, and what might seem very good in one material would fail to be as successful in another.

Decorated leather is the richest of all wall coverings, and it is certainly one of the most expensive. It is a covering intended only for rooms of great luxury and only suited to such. Its rich deep tones of dark brown are marvelously beautiful, and the enriching effect of other colors, deep and warm in tone, is most striking. It is so splendid in its effect that its use in other than the most expensive of houses, seems out of place. Tapestry is also another costly material, and is often most effective.

Historic Mansions of the James River

III.—“Westover,” the Ancestral Home of the Byrds, Now the Ramsay Homestead

By Francis Durando Nichols



WESTOVER, which lies on the north bank of the James River, about half way between Martin's Brandon and Shirley, is one of the oldest and most beautiful of the old-time properties in Virginia.

The plantation was laid out by Sir John Pawlett, the original patent having been issued to his brother, Thomas Pawlett, January 15, 1631. In 1665 it passed into the hands of Theodoric Bland, from whom William Byrd purchased it in 1688. It consisted of two thousand acres of land, for which he paid 300 pounds sterling and ten thousand pounds of tobacco.

On the summit of a bluff which rises abruptly from the James River, and some two hundred yards back from the terraced sea-wall, William Byrd proceeded to build the Mansion House of Westover. Though he owned considerable land in the neighborhood and could have placed his resi-

dence wherever he thought proper, he chose this site upon which Westover is built, for the reason that Nature had endowed it magnificently, with its high plateau gracefully studded with fine trees and shrubs, and the mansion was erected in due order and in such a position that it was placed just far enough from the river to insure the retirement which he sought. The main approach to the house is through a lofty gateway, the stone pillars of which are about ten feet high and are surmounted by eagles. From these stone pillars swing handsome gates of hammered iron, which were made in England for Colonel Byrd, and are particularly interesting as being the first ornamental iron work brought into America. The monogram of Col. William Byrd is interwoven in the scroll at the top of the gate. Extending in either direction from the gateway is an iron fence, the many posts of which are surmounted by ornamental tops, a different design for each post. Passing through the chief

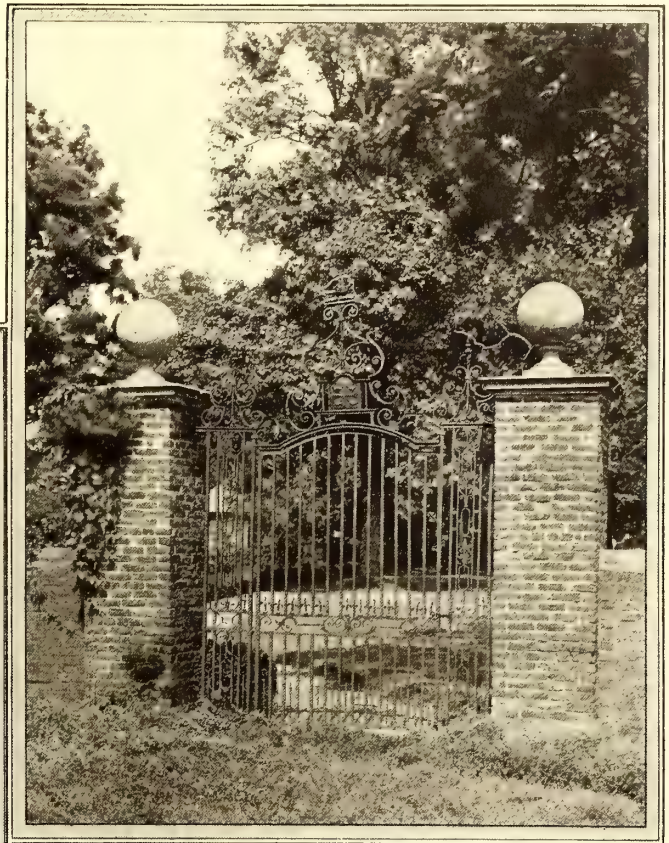


Fine Old Trees Shade the River Front of the House

gateway one enters the court in front of the house. The impression at once obtained of the mansion is its generous proportions and its elongated effect. It is a large central building, three stories in height, surmounted by a hipped roof, relieved by a row of dormer windows. Colonnades, extending in either direction from the main building, connect with wings, one containing the kitchen and service rooms and the other the loggia and the ballroom.

The house was built in a most substantial manner, and in those days when honest workmanship was preferred to shoddy display. It is constructed of red brick, which have grown old with age, harmonizing well with the black of the steep slated roof, that blends into the deep green of the superb tulip poplars which sweep the

of hammered iron in which the arms of the Byrd family are interwoven, but are almost lost in the luxuriant growth of vines which overhang them.



Old Gateway of Wrought Iron



Tomb of Evelyn Byrd



The House Is Built of Red Brick which Has Mellowed with Age

roofs and shield the broad facade from too inquisitive a view from the river below the house.

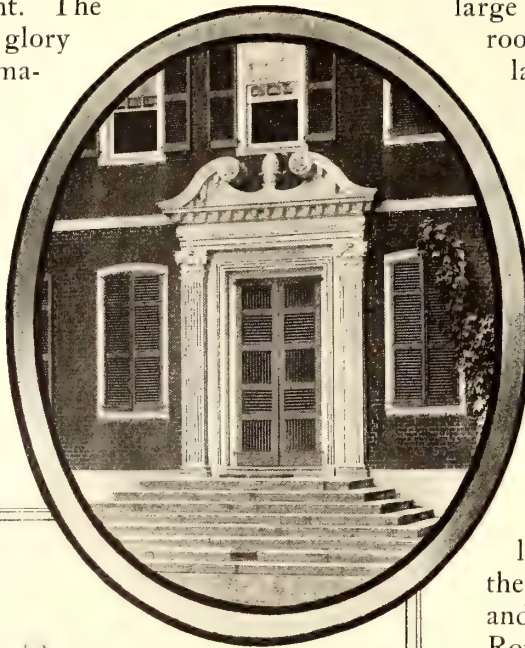
There is a closely clipped lawn, which is inclosed within a red brick wall, broken on either side by gateways, provided with square brick pillars and ornamental iron gates. The avenues from the boat landings end in smaller gates

The picturesque entrance ways which are placed at either side of the house are reached by a series of three-sided stone steps. The entrance doorway from the roadway has a storm vestibule, inclosed with glass, with Corinthian pilasters and a classic pediment. The doorway of the river front of the house has similar pilasters and capitals, its pediment being

handsomely carved, using the pine apple as the symbol of hospitality. Both entrance ways open into the elaborately carved and paneled hall, which is about fourteen feet wide and extends through the depth of the house. The wood-work here is treated with an old ivory-white paint. The fine staircase is of extra width, and its crowning glory is its twisted balusters carved out of solid mahogany brought from England.

The drawing-room, on the left side of the hall, is heavily paneled, and has ornamental cornices of great beauty. The feature of the room is the chimney-piece, which Colonel Byrd imported from Italy. It has a very fine white marble pediment and borders, contrasting in a striking manner with the background of black-veined marble. Colonel Byrd paid the equivalent of twenty-five hundred dollars for it,

Door of the
River Front



which shows the magnificent manner in which the master of Westover lived in the old Colonial days. Steps from this room, as well as from the library, lead down into the loggia, from which access is obtained to the ballroom. The loggia has windows on either side, which when closed in winter convert it into a perfect sunroom. It contains green wicker furniture, and has plenty of growing palms and plants placed about it. The ballroom beyond is a fine room, with paneled walls from the floor to the ceiling, surmounted by a heavily molded and dentailed cornice, all painted old ivory-white. The stage at one end of the room has a fully equipped lighting apparatus for the production of amateur plays and for the use of an orchestra when Terpsichorean delights are to be indulged in. The stage is supplied with dressing-rooms and an outside entrance thereto. It makes an admirable adjunct to a large country mansion such as Westover is. Connecting with the drawing-room and also with the hall is the library, with paneled walls from the floor to the ceiling, treated also with old ivory-white paint. Book-cases of mahogany are built in and the fireplace has a marble mantel imported from Italy.



Tomb of
Colonel William Byrd

Across the hall from the drawing-room is the morning-room, which is designed and furnished in the Louis XV style. There are sea-green panels with cream-white trim from the floor to the ceiling. The fireplace has modern buff brick facings and hearth and an exquisitely carved mantel.

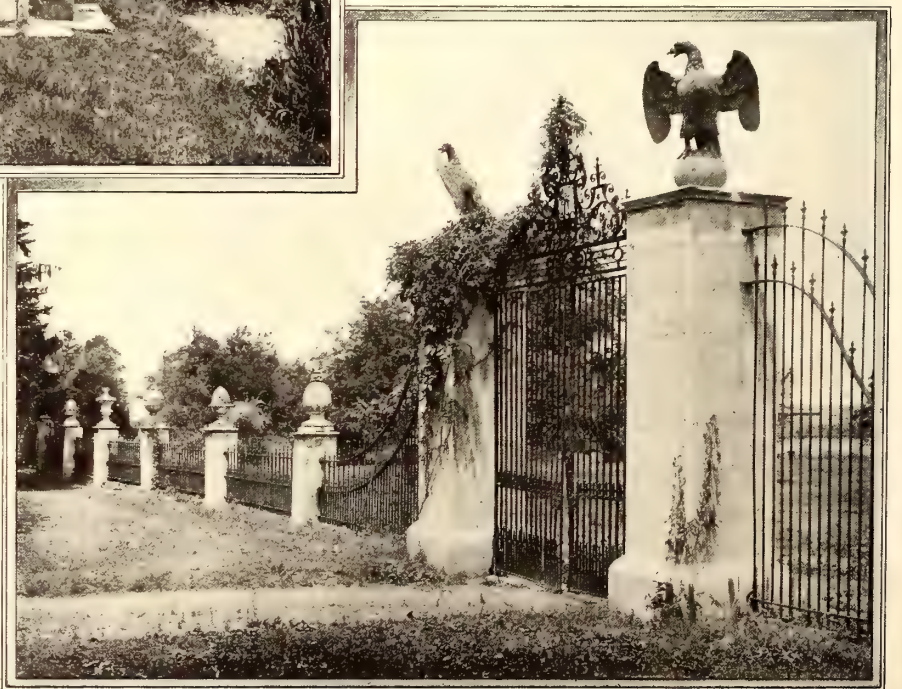
The dining-room, to the right of the main entrance and across the hall from the library, has paneled walls with a

heavy molded cornice, all of which is painted old ivory-white. The fireplace has a finely carved mantel. The sideboard is a fine old Hepplewhite, and the lowboy, the corner closets and other furniture are of mahogany.

A large square hall connects the dining-room with the butler's pantry; this is large and ample in size, and is fitted with the best modern conveniences.

It gives access to another large hall, with exterior entrances on either side, beyond which is the large, square kitchen in the west wing. Here also is the laundry and a hall staircase by which the servants' quarters on the second floor are reached. The chambers on the second floor of the main house are finished and decorated with the same elegance and refinement which mark the interior of the lower rooms; in fact, every part of the house gives proof of the wealth and taste of its founders and owners. Romantic interest is centered in the sleeping-room which was occupied by Evelyn Byrd, and which is directly over the morning-room.

William Byrd, the first of the family of that name to reach America, migrated with his bride, about 1674, from England to Virginia, having come from the little town of Broxton in the County of Chester. Little is known of his life and transactions from the time of his arrival in Virginia until his decease, except that he had large patents of land. The Government gave him a liberal grant of



The Main Approach to the House Is Through a Gateway of Early Wrought Iron

land contingent on his settling, with fifty able-bodied men, at the falls of the James River, where is now the city of Richmond, and where formerly stood a block house which was erected in 1645 to protect the settlers from the Indians. William Byrd, while having large patents of land in Virginia, really got his start in life from his uncle, Capt. Thomas

Stegg, who, being disgusted at the collapse of the Cavalier cause, shook off the dust of Puritan England and migrated to Virginia, where he died shortly afterward, leaving his estate to the young couple, who came to Virginia to claim it. He was born in London, but he had good Cheshire blood in his veins, for he could trace his descent from Hugo le Bird of Charleton. His wife, Mary, was also of good family, for her father, Col. Warham Horsemanden, was a Kentish Cavalier and was descended in a direct line from Edward III.

Col. William Byrd, the second of the name, was born March 28, 1674. He inherited the vast estate and became the master of Westover. His portrait, together with the portrait of his daughter, Evelyn, hangs in Martin's Brandon.

Colonel Byrd was much more than a man of the world, for though he spent his childhood days in Virginia, his education was gained in Virginia and in England, and in school and in trade he was possessed of that training and refinement which few men of his day had acquired. While he was devoted to agriculture, and his plantation

Mr. George Evelyn Harrison, the son of her daughter Evelyn, who had married Mr. Benjamin Harrison, of Martin's Brandon, and in this way they came into the possession of the present Harrison family of that estate.

Colonel Byrd married, in 1706, Lucy Parke, the daughter or Marlborough's aide-de-camp, who carried the news of the great victory of Blenheim to Queen Anne. Her eldest sister, Frances, the year before, had married Col. John Custis, the ancestor of Martha Washington's first husband, and this explains why one of Sir Godfrey Kneller's portraits of Col. Daniel Parke is hanging in the drawing-room of Martin's Brandon, from whom George Washington's



The Morning-room

was the object lesson of all the country about him, his mind was turned toward intellectual and artistic pursuits.

Colonel Byrd was the master of Westover for forty years, and during that time he gratified his tastes by the collecting of works of art for the decoration of his house and for the beautifying of his garden. It was one of the first estates in America to be adorned with statuary. He built elaborate conservatories, the ruins of which are now traceable, fine gardens, and laid out drives and walks from the interior highways and from the river. His library, which was commenced by his father, was the first private collection in America. The catalogue, which is still preserved, enumerates 3625 volumes.

The famous Westover manuscripts, which were written for private perusal, and were reprinted in the last century, establish him as one of the keenest intellects of his time. They descended to his son, Col. William Byrd, who married Mary Willing, of Philadelphia; she presented them to



The Stairs and Hall



The Dining-room Is Furnished with Old Mahogany

adopted son, George Washington Parke Custis, derives his name.

Evelyn Byrd, his daughter, lived a life which was poetic and romantic. She was born at Westover, July 16, 1707, and died in her thirtieth year. She early in life displayed a quaint poetic fancy, and her life was spent among books and flowers. She also developed signs of uncommon talents and virtues, both of which were cultivated with great care by her father, who sent her to England, where she was educated

in all the accomplishments of a polished gentlewoman, and became a lady of fashion. As she grew into womanhood her beauty became famous, and at sixteen she was presented at Court. The carved ivory fan which she carried at her presentation is now in the possession of Miss Harrison of Martin's Brandon.

The pathetic romance of Westover is familiar to readers of history. It is said that among the many men whom Evelyn Byrd met while in England was the grandson of the famous Earl of Peterborough, with whom she fell in love and to whom she was actually engaged. But her father forbade her marrying him on account of his religious views, and

she eventually died of a broken heart. Evelyn Byrd had other admirers, among whom was Daniel Parke Custis, who was favored by both his father, Col. John Custis, and Colonel Byrd, but he finally married Martha Dandridge, who later married George Washington, and who is historically known as Martha Washington.

The tombs of the master of Westover and his favorite daughter rest under the shade trees in the grove quite close to the house, and are passed on the road from the boat landing to the mansion. The family burial-ground also contains many old tombs which are covered with descriptions and coats-of-arms, among which are those of Cap. William Byrd, the emigrant, and Mary his wife; William Byrd, the second, and Evelyn Byrd, his daughter; Benjamin Harrison, of Berkeley, father of the signer; Mrs. Harrison, Rev. Charles Anderson, Col. Dalter Aston, and others.

Col. William Byrd's monument, which is in the old-fashioned garden in the rear of the mansion, contains a very concise record of his life, on one side being the following inscription: "Here lyeth the Honorable William Byrd, Esqr. Being born to one of the amplest fortunes in this country, he was sent early to England for his education; where, under the care and instruction of Sir Robert Southwell, and ever favored with his

particular instructions, he made a happy proficiency in polite and various learning; by the means of the same noble friend, he was introduced to the acquaintance of many of the first persons of that age for knowledge, wit, virtue, birth or high station, and particularly attracted a most close and bosom friendship with the learned and illustrious Charles Boyle Earl of Orrery. He was called to the bar in the Middle Temple, studied for some time in the low countries, visited the Court of France and was chosen Fellow of the Royal Society." On the other side of the monument is: "Thus

gentleman and polite companion, the splendid economist and prudent father of a family with the constant enemy of all exorbitant power, and hearty friend to the liberties of his Country. Nat. Mar. 28, 1674 Mort. Aug. 26, 1744 An. Aetat 70."

Upon the death of Col. William Byrd II, Westover became the property of William Byrd III, who was born at Westover on September 6, 1728. He was only sixteen years old when his father died, but he acquired the education of a gentleman and became one of the most accomplished men in the colony, and naturally followed in the footsteps of his ancestry.

When George Washington was colonel of one of the two regiments of the Virginia militia, William Byrd commanded the other which accompanied General Forbes in his expedition against Fort Duquesne, and he enjoyed the esteem and friendship of the distinguished patriot.

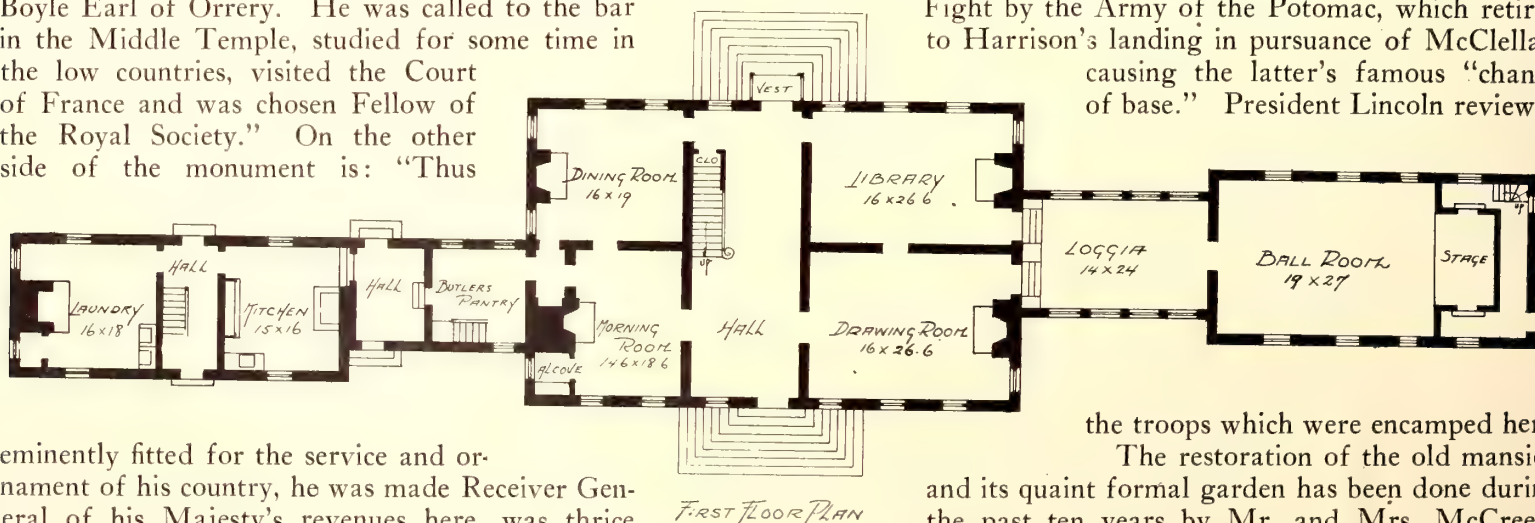
The English landed three times at Westover under Arnold and Cornwallis. During the Revolution, Benedict Arnold, the traitor, a cousin by marriage of Mary Welling, left New York and sailed up the James River, where he anchored and proceeded in small boats to Westover, with about nine hundred men, and prepared to march on Richmond.

The estate of Westover was held by the descendants of Colonel Byrd until 1814, when it passed out of the family.

During the Civil War, when Mr. John Seldon was owner of Westover, it was used as a Federal headquarters. Fitz John Porter's corps encamped on its wheatfields and occupied the old mansion after the Seven Days' Fight by the Army of the Potomac, which retired to Harrison's landing in pursuance of McClellan, causing the latter's famous "change of base." President Lincoln reviewed



The Drawing-room Chimney-Piece Was Imported from Italy by Colonel Byrd



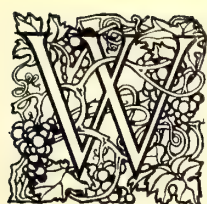
FIRST FLOOR PLAN

eminently fitted for the service and ornament of his country, he was made Receiver General of his Majesty's revenues here, was thrice appointed publick agent to the Court and ministry of England, and being thirty-seven years a member at last became President of the Council of this Colony. To all this were added a great elegancy of taste and life, the well-bred

the troops which were encamped here. The restoration of the old mansion and its quaint formal garden has been done during the past ten years by Mr. and Mrs. McCreery Ramsay, its owners, and the interior furnishings include some of the rarest pieces to be found in America. Mrs. Ramsay is a collateral descendant of the Byrds, and the old place is once again in the family.

A North Shore Garden at Manchester-by-the-Sea

By Mary H. Northend



WHEN Manchester-by-the-Sea was young and unknown to the summer guest, Richard H. Dana, the poet and essayist, while driving along the main road between Manchester and Magnolia, heard the sound of the sea upon the beach. Upon investigation he found that the forest land at his right presented an ideal location for a summer home; and so impressed was he with the natural beauty of the spot that he bought a tract of thirty acres, and became the first summer resident of Manchester, advance guard of the summer contingent that now holds the North Shore from Beverly Farms to Gloucester.

Mr. Dana settled here in 1845. For years he enjoyed it, with the friends who always surrounded him. Among these was Charles Sumner, who never tired of praising the romantic beauty of the scenery, lauding it above the far-famed Biarritz, the summer resort of Napoleon III. This is now the summer home of Mr. Gardiner M. Lane, president of the Museum of Fine Arts in Boston, and son of the late Professor Lane, of Harvard College. It has been changed materially, and



Inside the Pergola

every change has been for the better. Not many years ago this part of the original estate was thrown upon the market, and it chanced to be at a time when Mr. Lane, while seeking a suitable place in which to establish a summer home, was attracted by the beauty of the North Shore, with its rugged rocks and picturesque headlands. Influenced by the beauty of the location at Dana's Beach, as well as by its historical associations, he purchased the land, and built upon the site of the old house a handsome Colonial mansion.

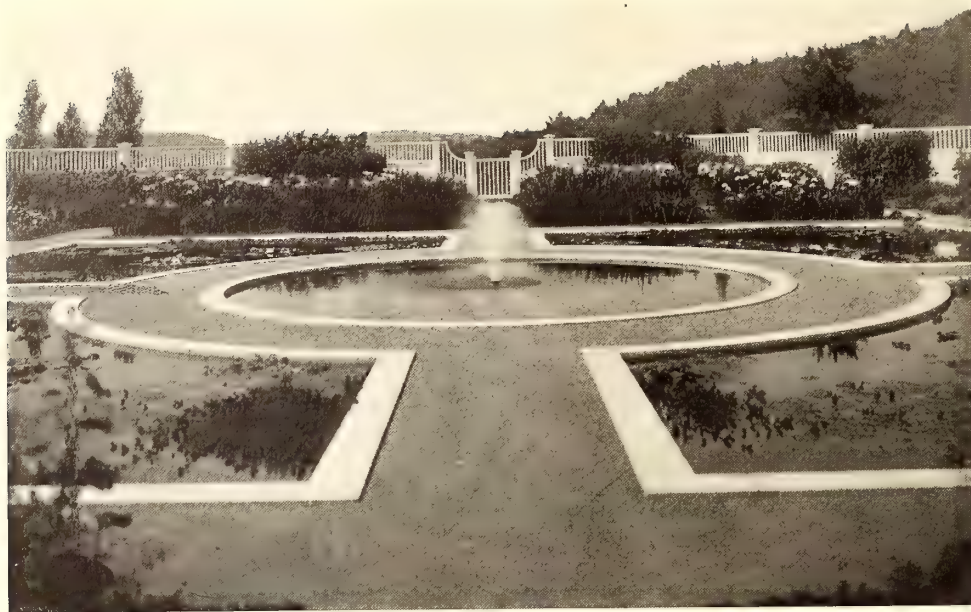
The grounds are extensive, and the winding avenue which leads from the main road gives but little idea of the beauty hidden from the public gaze. Slowly upward mounts the avenue, climbing the hill between shadowy trees, whose branches leave no opening for the passage of the summer sunlight. Dotting the grass land, at the foot of trees, by the side of the roadway, are planted, as if by Nature, rhododendrons and other flowering shrubs, making a picturesque foreground to the background of trees.

At the summit of the rising land stands the house, overlooking the ocean, black in storm, blue in sunlight, or silvery gray in twilight mist. Before the house wide lawns stretch to the very edge of the cliffs, and at one side lie the gardens.

Just beyond the porte cochère we come to a break in the hedge of shrubbery which lines this part of the avenue, and see English stepping-stones cunningly laid in the grass. These enable us easily to reach the



The Garden Path from the Pergola to the Entrance



The Pool and Fountain Are Surrounded by Water Beds

garden proper, which was laid out only last year by the present owner. From one side of the wide veranda which fronts the cottage is a large main walk, with a border of flowering plants, so arranged that it presents from month to month a succession of bloom.

On the right are beds of flowers, intermixed with shrubs; and beyond the path leads beneath a trellised arch, which marks the point of division between the garden beds and the handsome garden of only a year's growth. On the other side of this



The Pergola Framing in the Garden

garden is the tennis court, hidden from view by the pergola of trellis work, over which vines have begun to clamber. Herbaceous plants and trees, to the left, hide the cliff and the sea with its sandy beach below.

The garden, which is very extensive, is surrounded by a high ornamental fence. The central feature is a large square, fully seventy feet in diameter, in the middle of which has been placed a round pool twenty feet across. This is surrounded by four separate pools, which occupy the corners of the square. Each of these basins is several feet deep, and defined along the water's edge in marble. The circular central depression is carefully designed to contain in the future a handsome carved fountain of Italian marble, which has not yet been placed. In the four corner basins numerous goldfishes sport about among the stems of aquatic plants, which grow here in great profusion. There are many water-lilies of great variety and beauty, whose cup-like leaves, floating on the surface,

form a pretty setting for the blossoms above. Gravel walks, about three feet wide, intersect the four sides, and surround the central pool. Tunnels, built beneath these walks enable the fish to swim freely from one basin to another.

Viewing the whole effect of this central embellishment, one can not fail to be impressed with the extraordinary beauty and harmony of the plan, which reflects great credit upon Mr. Olmstead, who designed it.

One side of the garden is given over to a trellis, which follows a clearly outlined plan. Its beauty will soon be enhanced by the many vines and roses which will cover it. It is decorated with tubs of evergreen shrubs, cut in formal fashion, and so carefully set as not to obstruct the pleasing view. This trellis faces, on the one hand, the ocean, and on the other, the interior of the garden, with its central fountain and its many beds of gorgeous flowers, planned

to follow one another in carefully selected succession, so that there is never dearth of bloom. On the side next the sea

has been built a pretty, artistic, covered lookout, of some length; this is spacious, and furnished with seats. On the other side, overlooking the lower terrace, is the kitchen garden, hidden from view by the decorative fence.

The many-hued iris is a special feature of the grounds, and most of them are of the wonderful Japanese varieties. They lend themselves admirably to the task of

beautifying the walks by the fountain with well-defined effect. The leading idea of the garden seems to be to mass the



The Basins and Flower-beds of the Water Garden



Great Masses of the Same Flower Are Kept Distinct in Formal Beds

different flowers together for borderings, with due regard to difference in height, while each variety is kept distinct in the formal beds occupying the center.

This is illustrated by the introduction of poppy beds, whose dainty, fragile flowers show a rich variety of coloring; and a carefully tended pansy bed, with face-like blossoms of remarkable size. Beyond is a bed of Japanese lilies; there is one of dianthus; and a conspicuous bed of ten-week stocks.

A glance at the border shows all these flowers charmingly intermingled with long plumes of larkspur, or spear-like leaves and butterfly flowers of the Japanese iris, or dainty golden stars of coreopsis. They revel and run riot with phlox, calendula and hollyhock, all of which are set against a rich background of pines, birches and poplars.

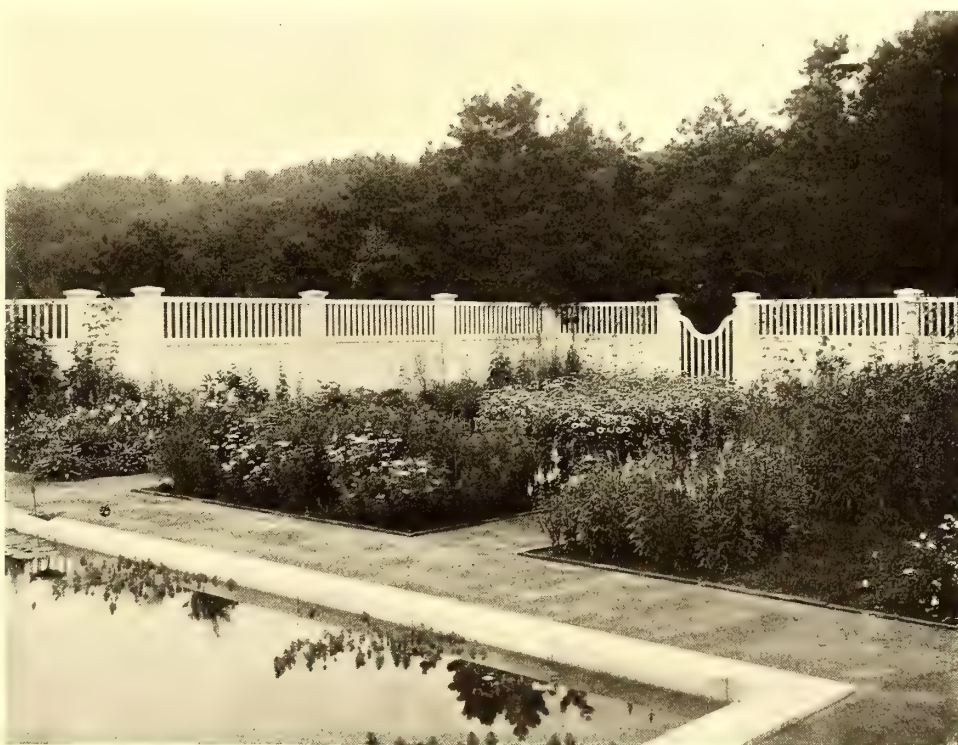
The garden is distinctly an individual one—but, then, all gardens are that. For even when the same plants and shrubs are grown there is an individuality of effect often without thought that this is the end reached. Here, however, we have an eminently distinctive garden decorated, embellished and beautified with comparatively simple means. The architectural treatment is modest,

and is confined, for the most part, to the boundaries and outlines. Even when the central fountain is finally put in place there will be little of the architectural enrichment with which many gardens are embellished. Yet there is no sense of lacking here, for the garden is beautifully planted, and has a true floral beauty that is really its own.

It is a garden of flowers, and hence is a garden of the most beautiful type. It is a garden of flowers agreeably planted and wisely chosen. It is a garden of gay-blooming, sweet-scented flowers, where one seeks—and finds—nature's beauty only, and finds it beautifully arranged.

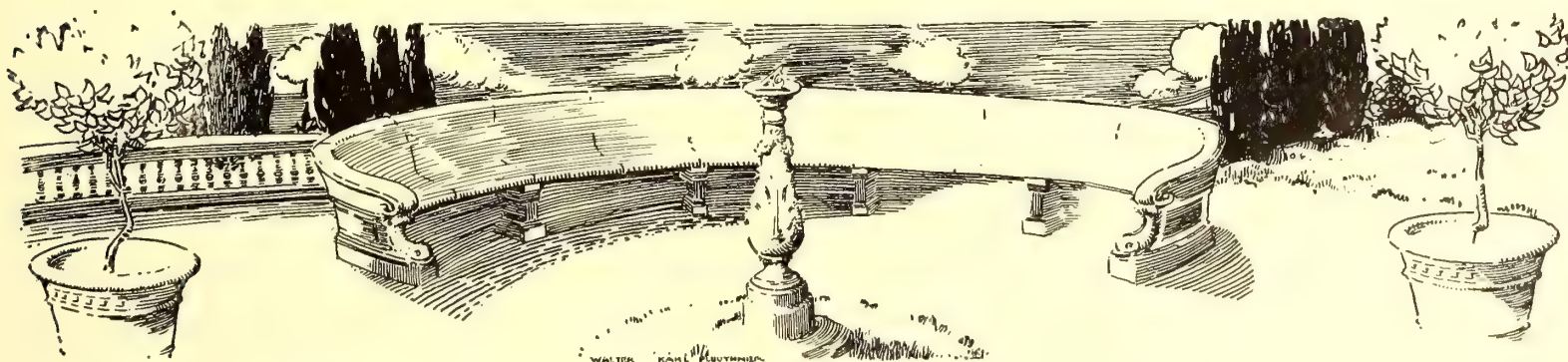
Here, then, is a true nature's treasure spot that will bloom and grow yearly on Massachusetts's beautiful North Shore. It is but the simple truth to add that it is but one of such natural adornments spread out below this fair blue sky; yet it has its own note of loveliness and its own individual character.

Mr. Lane's garden is a fine illustration of the decorative value of gardens. It has



The Garden Is Surrounded by a High Ornamental Fence

been planned and planted as a decorative adjunct to an interesting house and as a part of an interesting estate, and the interest of the whole place is heightened by it.





Color Richness Is the Keynote of the New French Parrot Frieze

Crowns, Friezes and Borders

By F. Maude Smith



ESPIE the fact that many of the most tastefully papered rooms are minus anything like a frieze or a crown, the wallpaper being carried straight up to the cornice, there are many instances in which such a decoration adds immensely to the beauty of the entire house. This is especially true of

a room in which there are few pictures. For bed-chambers, dressing-rooms, morning-rooms, and certain dining-rooms, such a finish to the upper part of the wall is likely to be very charming. As a rule, too, it is best suited to the simpler sort of house, since the arrangement of the statelier styles is more than likely to be complete without wallpaper, excepting in some of the upper rooms.

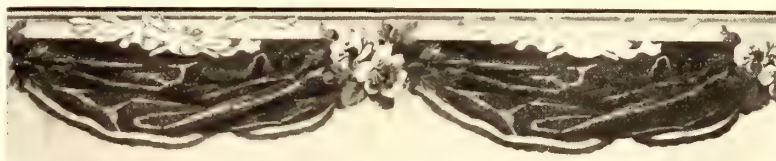
Just now the wallpaper most liked for the entire second story of a house and for some other rooms is white, either plain or with a glossy stripe. The next modish wallpaper is a diaper or other woven effect in white and a soft tint, usually delicate gray. Such a paper is correct for any downstairs room, as is the white with the glossy stripe. In any case the ceiling and cornice are covered with a paper in the kid finish in white, or an ivory or pearl tint, according to the side wall.

An elaboration in the crown effect that pleases

persons who do not like the plain side wall is one of the variations offered by wallpaper firms. That early favorite, the rose arbor effect, has had many fascinating followers, the nasturtium being among the latest. The nasturtium crown, a dainty riot of brown, orange and gold and sketchy foliage, comes with a lovely nasturtium bedroom paper on an ivory ground with a narrow high gloss stripe. Or it may

be used above a striped paper without the nasturtium figuring. It costs \$1.25 per roll of seven yards, while the side wall is a matter of thirty-five cents. Charming effects may be had, too, by cutting out crowns from wallpaper designed for the side wall. These may be distinguished by endless variety, as the range of floral papers to choose from is practically inexhaustible.

Quite the highest chic for bedrooms, however, is the very old-fashioned border, the narrow finish that topped the walls of our grandmothers. There are mere ribbon borders, flower borders and furniture gimp designs, caught with a bunch of blossoms at intervals, which are correct above chambray and diaper designs. Then there are valance effects, with the old-world charm of the posy-decked flounces and paper lace-edged bouquets of long ago, and little old-timey drapery effects, caught up with quaint roses and redolent of days ago.



Small Old-timey Drapery Effects Are Redolent of Days Agone



Cut Crown of White Grapes

For the nursery there simply must be a frieze, or, better yet, sections of friezes. And quaint nursery frieze sections may be had separately. The one illustrated costs seventy-five cents, and shows the modern sort to be as inspiring as the old-time sort was namby-pamby. Sturdy little Dutch boys and girls at play with solid Dutch toys are among the most popular, though that original Cecil Aldin "Cracking the Whip" group has by no means been ousted from favor. Such sections are often framed, or put up with glass headed pins, or pasted between architectural features. At any rate they should not be placed around the top of the wall, both because the effect is monotonous and up where the little occupant can hardly see it.

While this type of decoration is best suited to upstairs rooms, splendid effects may be noted on the main floor of many an attractive house.

A dining-room, for instance, may be vastly enriched by means of a crown cut from a fruit paper. A certain inviting dining-room in a Florida winter home has its cream wall-paper topped by a design cut from an orange-figured paper, showing fruit that looks as real as that which hangs outside the broad dining-room window. Very often the smaller fruits are utilized with fine effect, though it would be difficult to discover anything that lends itself as completely as the grape. A crown for a dining-room done in natural wood is cut from a paper with a Burne-Jones



Nasturtium Crown with Ivory Ground and Narrow High Gloss Stripe



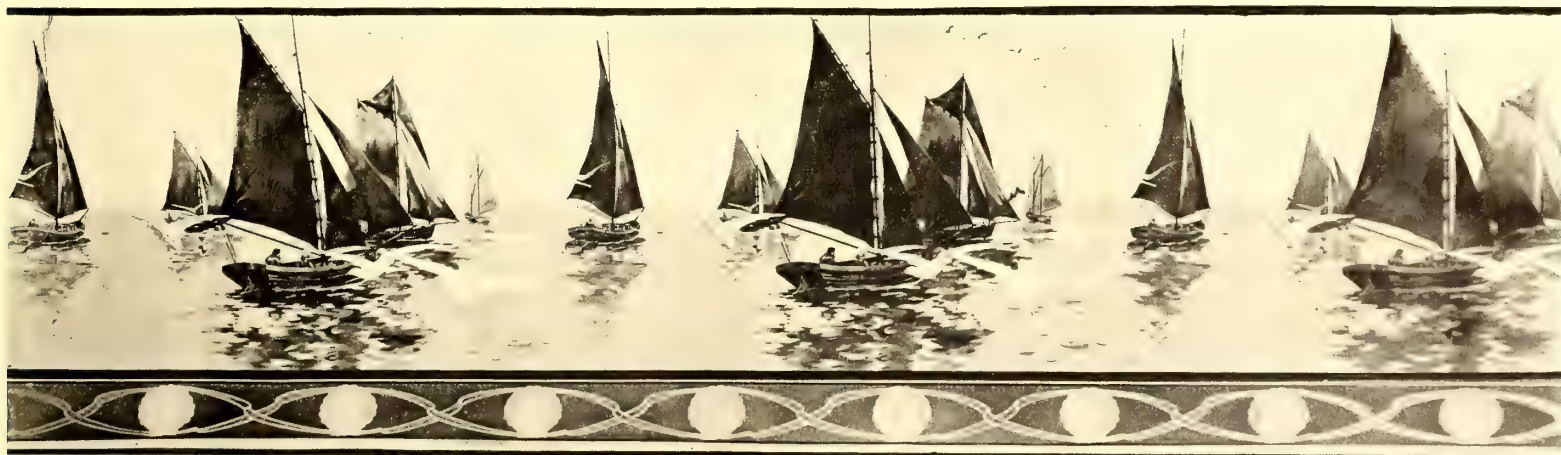
Quaint Nursery Frieze Sections May Be Had Separately

ground, which matches the plain paper that is used down to the wainscoting. Upon the heavy, gnarled vine in purple-tan shades are dainty tendrils, leaves of russet and green, and great grapes of deliciously warm purple hues. The pictured crown is cut from a design showing splendid white grapes on a magnificent vine, and is used above a white paper with a high gloss stripe in a room with immaculately white woodwork and rare old mahogany furniture.

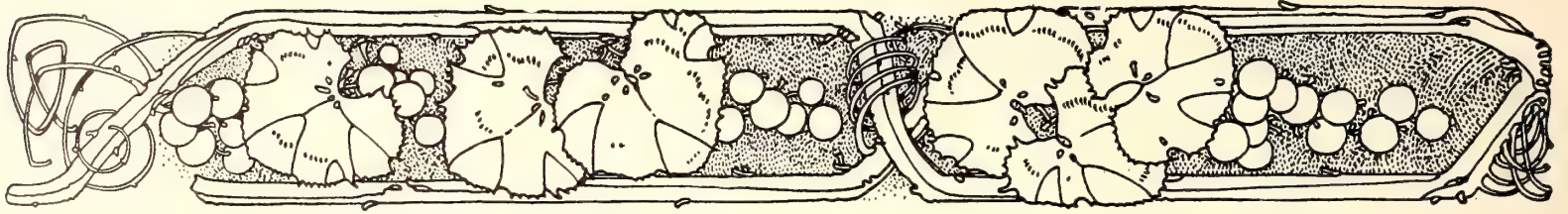
So out of the ordinary is the French parrot frieze, and so entirely "in the picture" with the Colonial furnishings of a Colonial house, that it can not be declared banal even by the greatest stickler for plain walls. No matter how dead friezes may be in the ordinary sense, they are tremendously alive if they be exceptional in themselves or very much in accord with the other furnishings, or with the taste of the occupant. This very deep parrot frieze, which costs \$1.50 per yard, shows splendid parrots done in blues and greens and a sumptuous, rosy shade which is both raspberry red and watermelon pink. Some of them are plucking rosy grapes from the massive vine with its richly tinted leaves. With raspberry pink hangings and a rug in that tone—what delightful warmth! Indeed, color richness is the key-

note of this superb new French parrot frieze.

Another exceptional example is the sunset yachting frieze, which has been used in the seashore house of a yachtsman.

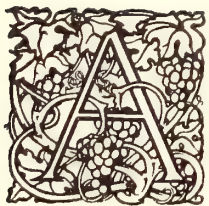


The Poetic and Fascinating Sunset Yachting Frieze



A Half-timbered and Stucco House

By John Mair



SMALL country house built for J. L. Bailey, Esq., at Wynnewood, Pa., designed in the English style and constructed of stucco and half-timber work, presents the expression of what an architect can do when he tries to attain a true domestic quality in his work, and gives a real feeling of home. Messrs.

Bailey and Bassett, architects of Philadelphia, who make a specialty of this class of work, have evolved a system by which the planning of a house of this character and the many problems which are to be overcome are greatly reduced, as shown by the results attained.

One of the most important of these is the solution of that ever present question of the servants' rooms in relation to the part of the house occupied by the family. Under the usual conditions of modern life these two separate communities must be accommodated under the same roof and with due regard for the privacy and comfort of each. It is not enough to consider the position of the rooms alone, but it is equally important that the various routes taken by the family and the servants should be as distinct as possible, and this the architects have been quite successful in doing, as is shown in the plans. It is a house of moderate proportions, and shows how far this question has been capable of treatment under the circumstances. A door from the main hall closes the service end from the main part of the house, and the relative position of the kitchen and servants' rooms prevents the passage of sound and kitchen odors to the main part of the dwelling.

The main entrance is inclosed with a rock-faced stone terrace which extends across part of the front of the house to the carriage drive, permitting of another means of reaching the entrance.

The design of the

exterior is excellent, and its small-lighted windows, its massive chimney, and its attractive dormers lend character to the whole general scheme. The walls above the underpinning are of rock-faced stone constructed of stucco of a soft gray color, while the trimmings and half-timber work is stained a soft brown. The roof is covered with shingles and stained a soft reddish brown color. The front door is recessed into the hall, thereby forming an outer vestibule in which there are placed seats on either side.

The hall is trimmed with chestnut finished in Flemish brown. It has a paneled wainscoting and an ornamental staircase of English character rising up to the second floor. The ceiling is beamed, forming panels. To the left of the entrance is the drawing-room, which is treated with white enamel paint, and is furnished with an open fireplace with tiled facings and hearth and mantel. The library beyond is trimmed with chestnut, and it is finished in Flemish brown. It has a paneled seat and bookcases built in, and an open fireplace built of brick, with the facings and hearth of similar brick, and a mantel of good design.

The dining-room, across the hall, has a similar treatment, and has also ceiling beams. A door opens into the servants' hall and the butler's pantry, which is fitted with sink, drawers and dresser. The kitchen and laundry is fitted with all the best modern conveniences.

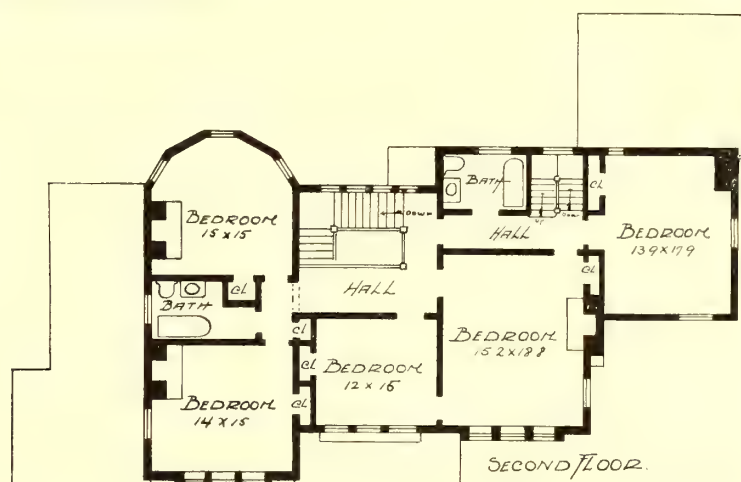
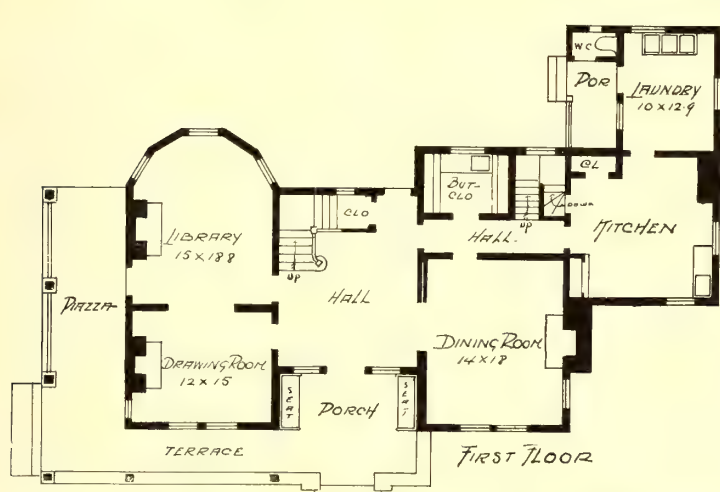
The second floor is trimmed with chestnut, and contains five bedrooms and two bathrooms, the latter furnished with tiled wainscoting and floor and porcelain fixtures and exposed nickel-plated plumbing. The arrangement of the various rooms in relation to the bathrooms is quite unique. One extra guest room, two servants' rooms and bath and a trunk room are placed on the third floor. A cemented cellar contains a heating apparatus, etc.



The Agreeable Exterior of a Well Planned House



The House Has a Real Feeling of Home



The Stable Follows the Style of the House

Flowers for House and Table Decorations

Three Months of Bloom for Forty Cents

By I. M. Angell



THIS is so much more "worth while" to raise our own flowers for table decoration, or for anniversaries and festive occasions, than to depend on the store-made kind from the florist. Whether they are intended to use as presents or simply as ornaments, they mean so much more if we have watched and tended them, in the hope of giving pleasure, than if they are only ordered from a greenhouse. The chief obstacle to the practising of this theory, of every man his own florist, is the uncertainty of having the plants in bloom on the dates they are wanted, but this can be reduced almost to a certainty by some experimenting and a little experience, especially with the winter-flowering bulbs. In our gardening career we have found bulbs the easiest and most satisfactory of all house-plants. For several years we have kept their records, so that we know what to expect of the bulbs, if we do our part.

Among their many good qualities are their long period of bloom and the short time it is necessary to have them around before and after flowering. The flowers of many kinds will keep in good condition for three weeks, a month, or even longer, if the plants are placed in a cool room during the blooming season. The pots need not be brought out till a few weeks before they are wanted for decoration. As soon as potted they are placed in a dark, cool spot to make roots, and as soon as their beauty has departed they can be put in a light cellar to ripen, thus being in sight only during the period in which they are interesting or beautiful.

From four kinds of bulbs, costing only forty cents, we had steady bloom from the second week in January to the first week in April. The paper-white narcissus began the display. This was potted the first week in October and brought from the cellar early in December. Five weeks later the flowers opened and the blooming season lasted till February 1st. The next pot brought out contained a blue

double hyacinth, Garrick; this was planted the middle of October and brought out to the light just two months later. The bloom began at the end of January and continued till the first of March. Poeticus narcissus provided our next table-ornament. Three bulbs were potted together, the last day of October, and the pot was brought from the cellar three months later. This was an unusually long time to leave them in darkness, but the better the root-growth before the tops start the better will be the bloom. The first flower opened the last week in February and the last flower faded the third week in March. Last, but not least, was the Empress narcissus, potted the end of October. As it will bear slow forcing, we kept it in the cellar for four months, in order to extend our season of blooming plants. It began to flower the fourth week of March and faded the first week of April.

Cost of the Four Pots of Bulbs

Paper-white narcissus, one bulb	\$0.05
Garrick, hyacinth, one bulb12
Poeticus ornatus, narcissus, three bulbs, @ 3 cts. each ..	.09
Empress narcissus, two bulbs, @ 7 cts. each14
Total	\$0.40

A good soil for bulbs is a combination of woods-earth, turf-soil and sand, with a little very old manure. As soon as they are potted we water them well and set away in a dark, cool place to make roots. This will take two months, more or less. They are ready to bring to the light any time after the earth is filled with roots. This can be determined by turning out the ball of earth when it is damp enough so the soil will not fall away. Bulbs should be kept slightly moist, not wet, or they will mold. First we bring them to subdued light, until the foliage part turns green, then we



Paper-white Narcissus, showing growth made in two weeks after bringing to light



Poeticus Narcissus, photographed less than three weeks after leaving the cellar, showing the rapid growth of foliage and buds



Poeticus Narcissus, potted on October 31, brought to light, March 1; budded, March 19; bloomed, March 25 to April 4



These two pictures show two weeks' growth. The plant was brought from the cellar on March 1, and on March 25 the first flower opened.

The foliage is noticeably broad and strong.

The Plant is the Empress Narcissus, one of the best of the White and Yellow Trumpets.



place them in full sunlight. A table with two or three shelves is convenient, as they can spend the four or five days, which they take to attain the proper green color, on the lower shelves of the table, and as they are placed in full sunshine others may be brought to occupy the lower shelves, thus providing succession of bloom. A medium-cool, moist atmosphere agrees best with bulbs. Air that is hot and dry will blast the buds before they open.

We have experimented with narcissus to the extent of nearly forty kinds of named ones, and with hyacinths, tulips and crocus, to a less degree, and of them all we have found the following to be the most satisfactory for our condition: a cellar where the thermometer stands from forty to fifty and a light, sunny room that averages sixty degrees, warmer in the daytime.

Those that gave the best returns.—Crocus—mixed; tulip—Princess Marianne; Roman hyacinth—double blush; narcissus—poeticus, incomparable, paper-white (large-flowered). Von Sion, orange phoenix, double Roman and Chinese lily.

These were not so satisfactory.—Jonquils—small and insignificant; medium trumpet narcissus—we gave up this type because they were less showy than the doubles, less delicate than the poeticus and do not bear as many flowers as the polyanthus sorts; all-white, large, double and trumpet sorts—we had bad luck with these, they blighted every time; mixed narcissus were not satisfactory—the named sorts are much better and more than pay for the extra cost.

These four sorts are particularly beautiful.—The paper-white is the very popular all-white polyanthus narcissus seen in the florists' windows in early winter. The poeticus is a favorite with every one who has learned to know its pure-white petals and beautifully colored cup and its delicious

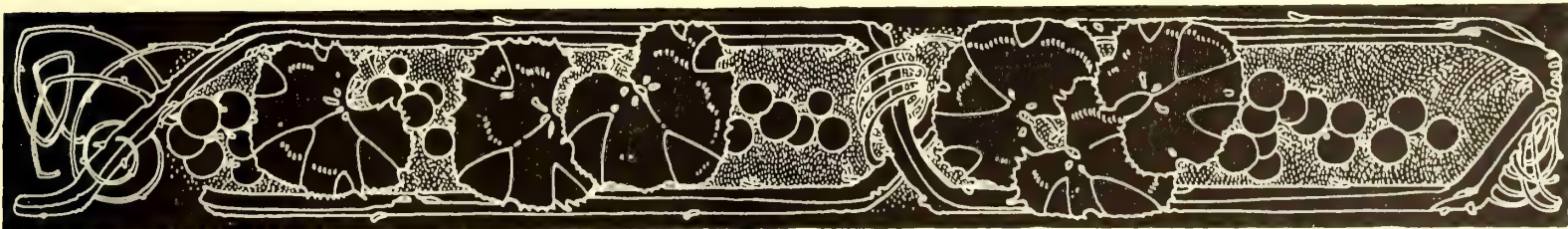
odor. It is one of the best for either indoors or outdoors. The Empress, worthy of its name, is a choice yellow and white, long trumpet narcissus. The foliage is broad and strong and the flowers large and handsome.

Among the bulbs mentioned as giving good returns in ordinary living-rooms are crocus, tulips and Chinese lily. There are a few points to be remembered in the handling of these bulbs, which will help to insure the best results. Crocus—the largest sized corms should be selected, and injured or imperfect ones should be discarded; the soil should not be kept too moist while roots are forming, as crocus seems to mold more easily than some of the other sorts of bulbs.

TABLE OF THE FOUR KINDS OF BULBS THAT SUPPLIED THREE MONTHS OF BLOOM

BULB	VARIETY	POTTED	BROUGHT FROM CELLAR	FIRST BLOOM	LAST BLOOM	LENGTH OF BLOOMING SEASON
Narcissus	Paper-white	Oct. 5	Dec. 6	Jan. 9	Feb. 1	24 days
Hyacinth	Garrick	Oct. 19	Dec. 16	Jan. 28	Mar. 1	33 days
Narcissus	Poeticus Ornatus	Oct. 31	Jan. 29	Feb. 26	Mar. 19	21 days
Narcissus	Empress	Oct. 31	Mar. 1	Mar. 25	Apr. 4	10 days

Tulips—the skin should be of a reddish color, but it is not necessary that the bulbs be of the largest size; it is important that they make good root growth. Chinese lily—the best place for starting this kind is a dish of pebbles and water; the water should be deep enough to reach half way up the bulb and allowance made for the lifting caused by growing roots.



Art Schools for Women

in the

Open Air



An English Method of Teaching Art

By W. C. Fitz-Gerald



THOUSANDS of women and girls in the old countries take a thoroughly practical course in art training for several years. One of England's most famous and successful portrait painters, Mrs. Jopling Rowe, did not begin to learn drawing or painting until four years after her marriage; and her income to-day is probably \$40,000 a year, chiefly from portraiture. Mrs. Rowe argues that even if a girl may not develop into a Rosa Bonheur, she may at least turn in useful dollars on black and white illustration, miniature painting, fan and china decoration, or even what is called "design"—artistic and original conceptions for wallpaper, carpets, cretonnes and figured goods of all kinds. The openings for real talent are very many, and really good work is highly paid.

Moreover, as we shall see, an art training nowadays is robbed of much of its old-time drudgery. Of course, steady hard work is absolutely necessary; what woman ever hoped to play a sonata of Mozart or Beethoven without many months of practice at monotonous scales and exercises?

Nowadays the course at an art school in Paris or London, instead of being suspended during the warm summer months, is merely transferred to the country, where in a sweet environment of meadow and brook, birds and flowers and trees, the students work in the sunlight of garden or lawn, with very real instead of artificial models of cows and horses, rustics and wagons; lovely landscapes and moonlit skies, against a picturesque background of perhaps seventeenth century cottages.

Some British art schools for women are actually transferred abroad in summer. Thus there is one which migrates across the English Channel from May to August to the lovely Norman seaside resort of Dieppe, not far from medieval Rouen, whose venerable cathedral

has for centuries been a favorite subject for artists. The most popular open-air English art school is that of Mr. Frank Calderon, son of a member of the British Royal Academy. The headquarters are in fashionable Baker Street, London. The school year is divided into three terms of about twelve weeks each, commencing in January, April and October. Classes are held for drawing and painting from live horses and dogs, as well as casts of all kinds, still life, and also from the human figure, both nude and in costume.

Lectures by the most eminent living authorities are arranged on art and anatomy. But the moment the sun returns in the spring the entire school is moved down into the country. It is in the little village of Finchingfield, Essex, not far from the Countess of Warwick's beautiful place at Easton, that Mr. Calderon's school is found during the summer months.

His headquarters are established in a beautiful rambling old country house covered with honeysuckle, purple Bougainvillea, and vines. Behind stretch rolling meadows starred with daisies, buttercups, and blue bells, and drop-



A Summer Morning in an Outdoor Art School



Neighboring Farmers Cheerfully Lend Their Animals for Models

ping gently to a brook such as Tennyson would have loved to describe. And round about are old tumble-down barns and outhouses with all the paraphernalia of an ancient English farmhouse.

Out in these gardens and lawns you will see groups of well-born girls and women seated at their easels, palette in hand, painting assiduously; an old patient plow horse acting as model, with perhaps a picturesque rustic astride his back. In showery weather the pupils assemble in one of the old barns, and here horses, cows and peasants are brought as living models.

Neighboring farmers cheerfully lend donkeys, goats, pigs and other animals, well knowing they will be taken care of and well fed and petted by the students. The life of the student is certainly an ideal one. There are but two classes a day, one in the morning and the second in the afternoon; and for the rest, ardent students roam at will sketching the many choice "bits" which abound in every direction. For instance, there are quaint old mills driven by wind or water which were here in days when Raleigh was Elizabeth's favorite. There are beautiful hills crowned with woods and flanked with wheat fields, picked out with scarlet poppies.

The open-air art school is, in short, a kind of summer club for girls; but their

devotion to their artistic labors is most noticeable. Mr. Calderon assures me he has the greatest difficulty in inducing his pupils to take a holiday or rest at all. Sometimes they will sit under big lawn-sunshades or parasols for three or four hours at a stretch, sketching a rustic milkmaid milking a cow on the sward beneath a giant oak.

There is nothing artificial about the composition of such a picture; for you have but to walk away from this most interesting of schools to the farmhouse over the hill and you will see similar "compositions" at every turn, with no thought of art at all. The only animals taken down from London are the dogs, of which Mr. Calderon has an immense collection, ranging from Russian wolfhounds to tiny lapdogs, such as fine ladies

take with them when driving in the park.

"Learn to draw from the living model at once" is the rule. "Cultivate your memory; do not lose sight of your enthusiasm, and refrain from working when it goes against the grain. And do not attempt to paint until you have learned to draw." Couture, the French painter, used to say, "Look for five minutes at your model and one at your drawing." This is the golden rule borne in mind at all these open-air art schools of the Old World.



Groups of Girls and Women Seated at Their Easels Painting Assiduously



The Charming Surroundings Are Keen Incentives to Constant Painting

Now and then an eminent Royal Academician comes down to inspect the women's work and give a little practical lecture on art. These visits, and the attendant examinations and criticisms, together with delightful tea parties and picnics, render the work of the art course very far from arduous.

The pupils have big charming bedrooms with plenty of light and air, daintily though plainly furnished. They rise at eight and troop down to a regular English farmhouse breakfast, served by rustic maids such as Jean François Millet himself would have loved to study.

By about half past nine the classes are arranged. Some girls will group themselves about an old plow and horse with rural attendants; others will decide to paint cows with a background of woodland trees; others again go in for figure-painting or portraiture pure and simple. Although the work is very valuable from a practical point of view, it also forms a most delightful artistic holiday for girls of culture and refinement, who may make acquaintances which develop into lifelong friendships. Then, too, the pupils find they have had so excellent a training, although

of from artificial models, they have the air of the "real thing" about them.

More than once no less a personage than Sir Edward Poynter, president of the Royal Academy, has gone to Finchingfield for a day or two and expressed himself delighted both with the practical and artistic work of the young ladies.

Altogether, it is no wonder these open-air art schools should be growing more and more popular, and many a delicate girl's constitution has been built up by a season's course amid the smiling valleys, wooded hills and sunlit meadows of Finchingfield. Moreover, the society there is found congenial by many a shy fragile girl, and the pure sweet air, musical evenings, and constant work, act as a tonic whose value can not be overrated. Besides, there is the possibility of winning a scholarship at the Royal Academy, which may amount to as much as \$1000 a year, and this will enable an economical student to travel abroad and study in the great Continental galleries, without which no artist's education is considered complete.



this has been acquired almost unconsciously, that on leaving the school they are fitted to begin paying work, no matter how humble. The students have been trained to draw directly from the living model, and without the tedious training from the antique figure, which was so prominent a feature in European art schools in olden days.

Rapid sketching of models in action does undoubtedly tend to give elasticity and ease to the drawing, and to do away with wooden stiff-looking effects which are to be avoided. Periodically the work of the students is sent up to London for exhibition, and invitations are sent out to artistic and fashionable folk of all degrees. The pictures sell extremely well, for only the best are on show, and being painted direct from nature instead

The Birth of the Wheat

By Percy Collins



GRAIN of wheat! Probably no single object, great or small, possesses a fuller significance, or is pregnant with a wider possibility in its relation to mankind than this tiny seed, which measures, in its dry state, one-quarter of an inch in extreme length.

Think, for a moment, what would happen if this grain, with its fellows throughout the world, were by some unforeseen chance to chain up its life principle within itself—if, in other words, germination were to be arrested for a single year. The result to mankind would be appalling. Not only would myriads of our fellow creatures be brought to the verge of starvation, but the whole fabric of civilization would be shaken to its foundations.

By what means is this calamity averted year by year? In what manner is the birth of the wheat secured? Man takes but small part in the miracle. True, he prepares the soil and watches long and patiently for the harvest. But with the actual labor of birth he has no concern. Nature alone holds the key, and we can only stand and marvel as we see the door of life revolving upon its hinges.

If we examine a grain of wheat (Fig. 1) separated from an ordinary farmer's sample, we see that it is more or less spindle-shaped, with a groove or channel on one side and a tuft of silvery hairs at one extremity. But the grain is shrunken, and its skin is wrinkled, and we shall be able to examine it more profitably after it has been steeped in water for, say, a period of twelve hours. Moisture will now have passed into the grain, and it will have become swollen—completely filling the envelope, or skin, which protected it during its period of sleep, which is now drawing to a close.

Regarding first what we may term the obverse of the grain (Fig. 2) we notice again the tuft of silvery hairs at one extremity, and at the other a slight prominence, bounded by a depressed area, or ditch. This prominence will shortly call for our undivided attention. It is the embryo—the germinating point of the seed—the spot whence issues the living wheat plant. For the moment, however, it will be sufficient to note that one extremity of the

prominence—that nearest to the hairy end of the grain—is termed, because of what lies beneath it, the plumule, or young shoot. The other extremity, for a like reason, is known as the radicle, or young root.

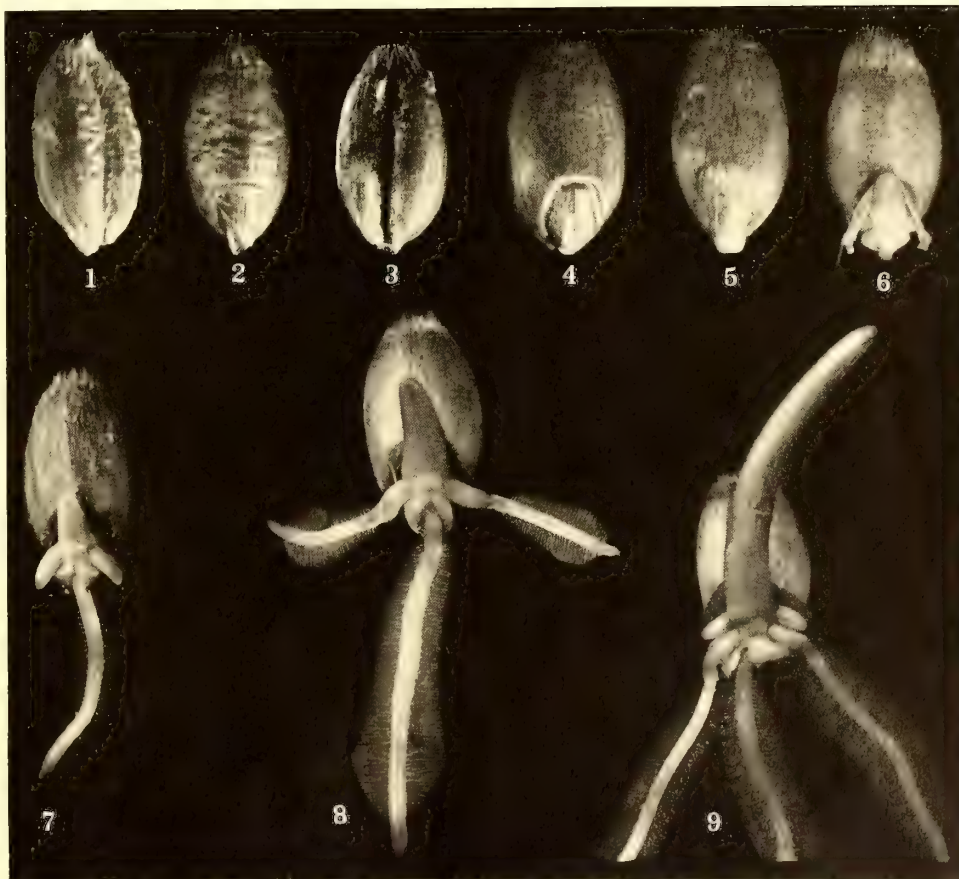
We may now turn the grain over and examine its reverse (Fig. 3). The tuft of hairs is still a feature, and we notice that the groove, or channel, originates among them. It may be regarded, in fact, as a kind of irrigation channel; for it provides a passage for the moisture collected by the hairs, and carries it to the embryo, the radicle of which is seen protruding from beneath. By means of the tuft of hairs, the groove, and the depression which surrounds the embryo upon the obverse side of the grain, the young root and the young shoot are constantly anointed with moisture throughout the whole period of their early development.

It is important to bear in mind that the bulk of the seed in a grain of wheat consists of a store of nourishment destined to support the young plant during the period of germination, and until it is sufficiently established to obtain food for itself from the surrounding elements. This store is called the albumen, and is quite distinct from the embryo, with its plumule and radicle, which forms the prominence at one end of the grain. The albumen, in fact, closely resembles the yolk-bag which is attached to and nourishes the young chicken prior to its escape from the egg shell.

The conditions necessary for the germination of a grain of wheat are moisture, warmth and the presence of oxygen. Exposed to these influences, the pent-up life within the grain

begins to manifest itself. The skin above the embryo ruptures, forming first a tiny orifice, which rapidly lengthens until a slit extending from end to end of the prominence is formed (Fig. 4). The birth of the wheat has now fairly commenced.

Later—after an interval, perhaps, of several hours—the watcher observes the sheath which guards the primary root protruding (Fig. 5). A few hours more and the whole sheath will be exposed to view; the protecting skin will be forced aside; while the tips of the young root and the young shoot will have emerged from opposite ends of the sheath (Fig. 6). At this period it is



1—The Untouched Grain
2—The Grain Soaked in Water: Obverse
3—The Same Reversed
4—The Beginning of Growth
5—The Protrudance of the Sheath Guarding the Primary Root

6—The Tips of the Young Root and the Young Shoot Have Emerged from Opposite Ends of the Sheath
7—The Extension of the Primary Root
8—The Development of the Adventitious Roots and the Root-hairs
9—The Beginning of a Second Pair of Adventitious Roots

often noticeable that the plumule is somewhat more advanced in growth than the radicle. This advance, however, is deceptive; for when we come to examine the next important stage in the birth of the wheat (Fig. 7) we invariably find that whereas the young shoot has made little growth, the young root has extended in a surprisingly rapid manner. Moreover, we notice that the tips of two more roots have made their appearance—the first pair of adventitious roots they are called; and we begin to realize, perhaps for the first time, that the birth of the wheat is a complex matter, and that we have as yet by no means seen the end of it.

For the moment, however, the reader will do well to pay exclusive attention to the primary root which has become so suddenly elongated. The very fact of its rapid growth seems to indicate its importance. Indeed, upon it devolves the duty of obtaining the increasing supply of moisture demanded by the germinating embryo. It must procure, moreover, certain chemicals in solution which are requisite for building up the living cell tissue of the plant which is to be.

So the primary root goes downward into the soil; and at a very early age it develops root hairs—delicate white filaments which spread out at right angles to the root. They assist it in its search for moisture; also, by their passage among the minute particles of soil, they probably add materially to the holding power of the root—an important function in view of wind, or heavy rain, which might at any moment strain the anchorage of the germinating seed.

The most interesting part of this tiny root, however, is its tip, or growing point. This is semi-liquid and transparent; yet it exhibits an exquisite sensitiveness which enables it to avoid destruction and threatened injury, and to feel its way between the particles of soil. One is tempted to endow it in imagination with a species of intelligence. "A radicle," wrote Darwin, "may be compared with a burrowing animal, such as a mole, which wishes to penetrate perpendicularly down into the ground. By continually moving its head from side to side, or circumnutating, he will feel any stone or other obstacle, as well as any difference in the hardness of the soil, and he will turn from that side; if the earth is damper on one than on the other side, he will turn thitherward as a better hunting ground. Nevertheless, after each interruption, guided by the sense of gravity, he will be able to recover his downward course, and to burrow to a greater depth."

Furthermore, the root tip appears to be gifted with a certain power of selection—some of the chemicals dissolved in the fluid which surrounds it being absorbed, and others being rejected. Thus, if we plant a pea and a grain of wheat in the same soil, the root tip of the former will hunt about for and take up whatever calcareous substances the water of the soil contains. But the root tip of the wheat will reject these, and obtain for itself all the silex, or flinty matter, afforded by the soil; and it is the deposition of this silex in the stem which gives to all grasses so much firmness, enabling them to withstand wind pressure, and to raise their flowerheads to the sunlight, high above the surrounding herbage. There is enough silex in a wheat straw to make a bead of glass, when melted with potash with the aid of a blowpipe. The

pea, on the other hand, being one of those plants which clamber over and support themselves upon other vegetation, does not require silex for strengthening its stems.

We may form a mind picture, then, of the primary root tip of the baby wheat plant working its way among the particles of soil, generally with a downward tendency, but turning aside from obstacles in its path, and moving hither and thither in its search for moisture and such chemical substances as it may need. Moreover, the primary root tip is not left long to labor alone. We have already seen (Fig. 7) the formation of two adventitious root sheaths; and from these shortly issue and

pass downward into the soil the first pair of adventitious roots, which soon produce root hairs and exhibit all the characteristics which we have observed in the case of the primary root. The condition of the grain at this stage is shown at Fig. 8.

In examining this photograph the reader will observe that the plumule has made comparatively little progress. But, as the three roots continue to work their way into the soil, the tiny plant begins to feel its power—if we may so express it—and the pale yellow plumule grows more rapidly upward in the direction of the free air and light. The plumule is not, in itself, a leaf; it is a sheath which enfolds and protects the delicate first green leaf of the wheat which we shall eventually see produced. Even now this leaf, complete in every detail, lies packed within the plumule; but the status of the plant is not yet sufficiently assured to warrant its production. So the plumule moves upward, while the three roots continue to burrow more deeply into the soil.

And now we note the commencement of yet another



10—The Beginning of the First Leaf
11—The Growth of the First Leaf: no Expansion
12—The Expansion of the First Leaf and the Development of the Sixth Adventitious Root

change (Fig. 9). The position of the tiny plant is to be made yet more secure by the production of a second pair of adventitious roots. The sheaths make their appearance, the root tips emerge therefrom and commence their journey downward, carrying with them the same responsibilities and vested with the same powers that we have seen manifested by the three existing roots. Our baby plant now possesses a root system comprising no less than five vigorous units, each endowed with individual powers of selection, but all laboring for the benefit of the one organism.

It is now—when the second pair of adventitious roots are well advanced (Fig. 10)—that the baby plant gains confidence to commence the unfolding of its first leaf (Figs. 10 and 11). The tip of the plumule (which has now risen high into the sunlit air) splits open, and the young leaf, delicate and beautiful as a fairy thing, begins to emerge. Hour by hour it reaches upward to the light; hour by hour the faithful root tips burrow, like moles or miners, into the dark, cold soil. Finally, there comes a quaint touch of nature which seems to link the baby plant in some mysterious way with the world of human thought and feeling. The first leaf has almost emerged from the plumule, but it is not yet perfectly expanded (Figs. 11 and 12). Is the infant organism hesitating? Does it mistrust its own powers?

Something of the kind would appear to be taking place, for as the leaf commences to expand a sixth root sheath is hastily formed at the base of the plumule, and a sixth adventitious root passes into the soil to augment the labors of its five older brethren (Fig. 12). Thus, with the perfect expansion of the first green leaf, and the production of the sixth root, the birth of the wheat becomes an accomplished fact.

Did space permit, it would be possible to trace the history of the wheat from its birth to its fruitful maturity. The first tiny leaf is already engaged upon that most marvelous of all labors—the formation of living materials from the inanimate elements of the earth and air. From its initial effort

the plant will go from strength to strength. Many leaves will be produced, to be crowned in due course by the flower-head which, in its turn, will change to the full corn in the ear—the manifold increase of the solitary grain. The baby root system, too, will undergo extensive elaboration, while the leading root tips will penetrate deeply—perhaps six feet—into the soil in their ardent search after moisture. But a bulky volume would scarcely afford too much space to deal adequately with a subject of such profound interest.

In tracing the various stages which mark the progress of the birth of the wheat, the infinite adaptability to circumstances possessed from the very outset by the developing organism has, perforce, been kept somewhat in the background. It has seemed desirable to picture, as far as possible, a grain of wheat germinating under ideal conditions, in order that the laws governing the process may be clearly understood. But this impression of straightforward growth must now be dispelled from the mind, for it is not, in point of fact, correct. A grain of wheat, thrown upon the bare furrow of the open field, and washed into the soil by the rain, is surrounded by innumerable particles varying in size from sand grains to large stones. Among and around these the root tips and the plumule must find their way, no matter how tortuous that way may be. Moreover, it is exceedingly unlikely that the grain will fall exactly in the position requisite for straightforward growth; so that the root and the plumule must turn to right or left, or even twist round the grain itself, in order to commence their respective upward and downward courses. The marvelous sensitiveness of the root tips makes them appear almost agile in their avoidance of impenetrable obstacles, while the same, in less degree, applies to the plumule. So that the baby wheat plant of a few days old usually contrives to twist itself into a confused tangle below the surface of the soil. A careful examination, however, will show that it has not departed in the smallest degree from the principle of growth which the writer has endeavored to describe in the foregoing account.

What is a Fireproof House?



THE term is somewhat relative, and it has been and is so much abused that people have grown a trifle skeptical about it. Even intelligent architects have been known to use a little wire lath on their partitions and then with superlative effrontery call the building "fireproof." A fireproof house is one built not only of incombustible materials but in such a way that even a conflagration will inflict but the slightest and most easily repaired damage; one in which fire can not travel from point to point via the structural parts, and one in which fire can be confined to some one unit of space or room in which it originates, even though the entire interior may contain much combustible furniture and fittings.

Many materials while incombustible in themselves can be very greatly damaged by fire. Thus it is with granite, marble, stone, iron, concrete, glass, etc. These materials, if used, and they all have their place, should be so arranged or protected that fire can not assail and damage them. The really fireproof house is the one whose external walls are of well-burnt brick and terra cotta; whose roof is of tile, metal, or asbestos shingle; its floors and partitions should be of hollow fireproofing tile; its windows where very near a neighbor or exposed to narrow alleys should be metal sash and wired glass; the stairways should in all cases be inclosed and with self-closing doors at every story, thus absolutely cutting off the several stories; the trimming and decorations, if marbles

are beyond the reach of the individual, should be plastic and colored decoration—avoid the wood wainscoting and the "cedar ceiling" as you would the pestilence; then in furnishing and decorating your houses go to the Japanese for really sensible suggestions—put in the minimum of frills and gew-gaws and finicky draperies; all those things are just like so much tinder, the scratch of a match and phew! there you have a first-class fire on hand.

If you still hanker for the pretty shingled effect on the side of the house, use asbestos shingling, something that is not quite as good kindling as is commonly used. But is there anything prettier than a dainty brick and stucco exterior, for instance? In some localities it may be economy to use some form of concrete construction instead of tile for floors and partitions. If you do so, let it be with fear and trembling and much prayer. Good concrete work is not combustible; it is damageable by fire; can be made eminently satisfactory for ordinary house-building, but it is most difficult to secure well-done work of that character.

The beautiful open stair of our fathers is one of the surest means of conveying fire from one part of the house to another. Avoid it. Inclose your stair in fireproof partitions. Apart from this fire question, did you ever stop to think that this open stairway, while perhaps rather attractive to the eye, adds just about fifteen per cent. to your cares, work and inconvenience? Altogether it is a menace to life, health, comfort and peace of mind.



Drilling Auger Holes for the Sticks of Dynamite



Firing the Dynamite from the Electric Battery

Dynamite on the Farm

By George Nathan



HE utilization of dangerous elements and forces for modern utilities is one of the most remarkable and significant of the advances of science. To utilize a simple force in a beneficial way has long been characteristic of human progress; it is by this method that civilization has advanced, new ideas have come into being, new inventions been perfected, and new powers obtained by man over the forces of nature. Had industrial progress been the theme of early philosophers, and had they been prone to look into the future, they would unquestionably have foreseen a time when, ordinary forces once overcome, the inventive genius of mankind would have been applied to the mastery of extraordinary forces, and even gone so far as to predict that the most dangerous forces would have been applied to many useful purposes.

Academic discussions as to what might be or might have been under non-existing conditions are not always of utility; but even the most casual observer must have long been aware that the utilization of dangerous forces has become characteristic of the present period. Every day new uses are not only being found for ordinary forces and powers, but elements that are admittedly dangerous even to the skilled and careful worker and those thoroughly familiar with them, are put to new uses that have some general or special utility, and which

transform a dreaded power into a force of pronounced utility.

There are probably few things that, by their nature and according to popular judgment, seem more unlikely to be of value to the farmer than dynamite; yet as a matter of fact it is one of those unlikely things that, when properly used, may be of the greatest assistance and value. As an agent for the removal of stumps and stones from land that is being cleared of trees and rocks it is to-day the most serviceable and desirable agent available for this work.

Tree destruction is one of the unavoidable misfortunes of country development. Crops can not be grown in forests, nor can houses well be built in such an environment. Tree chopping is, therefore, one of the most destructive callings practised in America. That the whole land has suffered from this—shall I so call it?—industry, is now an admitted

economic fact; but it is likewise true that much of it was unavoidable in the past and much of it is unavoidable now—unavoidable because tree culture and tree utility have only recently come to be understood among us, and because clearings and open spaces are essential to the cultivation of the soil and the erection of dwellings.

The destruction of trees by chopping, however, is but part of the task. The ground must be cleared, and cleared completely. This later stage of the work has long been the most arduous and irksome,



Ramming the Sticks of Dynamite Into Position



Burning Stumps and Rubbish at the End of the Clearing

calling for the expenditure of immense quantities of labor, and much expense in tools and animals used in completing the work of clearing. It is just here that dynamite comes in, performing a service of great value to those who use it, doing the work it has to do with excellence and dispatch, and permitting the instant cultivation of the ground or its utilization in other ways without loss of time or energy.

In undertaking to clear a piece of ground of tree stumps it is obvious, if the land is to be speedily utilized, that the work must be done as quickly and as economically as possible. And the question of economy is not alone that of the money cost of the tools and materials used, but includes also the economy of time—the most costly thing in the world—an ignoring of which often means many heavy losses and much fruitless labor.

It will, for example, take two men with a team of horses from a half to two days to remove a single tree stump, according to its size and the depth to which it has grown. Even with expert workers the task is laborious and expensive, and when multiplied by a hundred and several hundreds—as will be the case in a forest-grown country—the very cheapest land may become unpleasantly costly.

The greatest saving effected by dynamite is in time and labor. It is a saving so large that the cost of the raw materials and the simple implements required bear hardly any proportion to the cost of the work by

old-fashioned methods. As a matter of fact the tools and implements needed are the simplest: a long auger, a firing battery, starters, and a coil of fine copper wire. Nothing more, save the dynamite itself, is needed for the work. Yet there is one other thing required, and that is care. Dynamite, according to the popular mind, is an exceedingly dangerous compound. Carelessly used it is, of course, dangerous in the most positive sense. But the most dangerous article is quite safe if handled as it should be, and dynamite only needs to be handled in this way to be without any ordinary possibility of harm. One must avoid subjecting it to shocks, and it must be kept at an even temperature, neither too cold nor too hot.

Imagine, then, if you please, a modest unpretentious country house standing in a somewhat open ground, whose distinguishing feature is the numerous tree stumps that rise above the soil in every direction. The outlook, even on pleasant days, is gloomy enough and most discouraging to anyone who supposes that each individual stump must be cut out with the spade and dragged away with a team of horses. As a matter of fact this method proved not only so expensive but so slow that a more effective means was sought and dynamite was pressed into service.

The very simple tools have already been named. The chief one was the long auger, which was used for boring holes in the base of the stump for the reception of the dynamite.



A Final Explosion Left Everything Ready for the Burning of the Debris

mite. The number of holes varied according to the size of the stump, the large ones naturally requiring more explosive than the small ones. The auger must, of course, bore a hole that will readily admit the stick of dynamite, and the hole should be deep enough to reach the base of the stump.

The dynamite is then inserted in the cavity and pressed or forced in—gently if you please!—with a stick having a diameter about that of the stick of dynamite. The starter, by which the spark from the battery is applied to the dynamite, is then inserted and to it is attached one end of the copper wire. Connections must, of course, be made with all the pieces of dynamite in a single stump, and the wire run away to what may be judged to be a safe distance, where it is attached to the battery and everything is ready for the explosion. A heavy pressure on the lever of the battery box, and the trick is done. A novice will doubtless seek safety at a considerable distance, but after several stumps have been exploded it will be comparatively easy to gauge the point of safety.

The effect of the explosion varies according to the nature of the stump and the amount of dynamite employed. Some are blown to fragments, while others will be torn apart and will fall to the ground quite near their spot of growth. But in any event the work has been done, been well done, been cheaply done, and done in the most effective manner.

The final steps of the clearing process are simple enough, and involve neither danger nor expense. The exploded stumps must be gathered together in one place, as well as such underbrush as remains to be cleared up. A pulley attached to a tree left standing,



The Roots Are Sometimes Torn into Fragments While Others Are Simply Torn Apart

must be employed, but its utility is very great and its employment may readily be made a source of positive economy.

And why not? Land must be cleared, and cleared quickly;

or to a pole erected for the purpose, will often be found of value in this work. The great pile is then fired, and the whole matter is ended. The ground is now ready for cultivation and may be put to the uses for which it was cleared. Dynamite, therefore, instead of being dreaded by the farmer as something he has no concern with, of which he knows nothing and wishes to know nothing, may become a most useful agent in performing a very arduous and expensive kind of farm work. Certainly it must be carefully used, as all dangerous materials



A Pulley Attached to a Tree Is a Convenient Device for Gathering the Stumps and Rubbish for Final Disposal

it must be cleared economically and thoroughly. Dynamite, properly used, is the most effective means of accomplishing these ends.



The Interior Woodwork for the House

By George Ethelbert Walsh



THE remarkable advance in the price of lumber—about fifty per cent. in ten years—has had a most important effect upon house-building, and the home of the average family is undergoing radical changes that are almost revolutionary. Good lumber for house construction is becoming more difficult to find, and very costly at that, but bricks, concrete, terra cotta and stucco are not only cheaper than formerly, but much better in quality. Their substitution in the walls and framework of our houses for wood is developing a new line of architecture, and assuring for the owners more substantial and durable homes. Architects do not hesitate to say that within a few years wood will be too expensive a material for house construction, except in favorable sections of the country, and the number of homes built of this material must steadily decrease annually.

But whatever material may ultimately be chosen for building the walls, roofs, and sides of the houses of the future, wood must continue to dominate the finish of the interior. There is no apparent substitution for this work. Tile floors and walls may be adopted for bathrooms and kitchens for sanitary reasons, and marble, concrete, and composition of incombustible materials may even be used for floors; but the interior trim—the doors, windows, mantelpieces, base-boards, closets, wainscot, and stairways—must be of wood for many years to come. The increasing price of lumber has had an equally marked effect upon the interior finish of our homes in wood as on the construction of the exteriors. This is apparent both in the greater cost and the inferior woods employed.

The beauty of our magnificent old Colonial houses is due as much to the careful selection of the wood used and to the details of the workmanship as to the excellence of their style. The white oak sills of many of these houses are as sound to-day as when first laid, and the solid beams of hackmatack oak have not rotted or weakened during the century or two they have been doing service. A Colonial housebuilder would often select his trees in the woods for the important part of his structure, and the very choicest lumber thus found its way into the homes. The same is true of the interior finish and the cabinet work and furniture that went in the houses.

The average modern lumber is decreasing in quality as well as increasing in price. This is due to the fact that the choicest trees have been cut down, and in many cases second-growth lumber is substituted. Good clear pine of best quality, free from knots and fractures, is very expensive and difficult to get in some sections, and whitewood, which for the past ten years has been used so largely in place of pine for interior finish, is growing more imperfect in color and quality every year. Even oak comes in a much lower grade than it did a few years ago. Thus three of our standard woods for household purposes do not yield the same effects that they did five years ago, and a house "finished off with oak" may prove somewhat deceptive. It may not take the bright polish and grain effects which most of us are accustomed to associate with oak, and the cost will be greater.

The use of cypress for interior finish has grown greatly in recent years for the reason that it is no dearer than whitewood, and does not shrink so much in use, while it is easily treated by stain or natural finish. In selected cypress the grain effect is almost as striking as inferior oak, and the cost much less. The cypress should be stained, varnished, and

rubbed down to give the best results, and then all effects of cheapness are removed. But the drain upon our cypress forests is already tremendous, and it is not unlikely that the cost of this will advance rapidly in a few years.

For floors, selected yellow pine in narrow widths is probably as good as any wood, except for very expensive hardwood floors laid in patterns. The yellow pine floor chosen without a knowledge of the difference in quality of this lumber will not give satisfaction. Each lot of lumber should be carefully selected, and when put down in workmanlike manner will outlast an inferior floor many years and always give satisfaction. Unless the wood is chosen according to quality wide spaces will appear between the strips, and no amount of polishing and finishing can ever make it look first class. Whitewood, cypress, and similar soft woods make poor floors, and should never be used except where carpets are to be spread over them. A painted floor of cypress or whitewood gives poor satisfaction, for the wood is too soft to withstand the wear and tear, and paint, after all, is to protect from weather rather than from friction. Oak, plain or quartered, ash, and birch are woods that should never be painted. Their grain is too beautiful to be concealed from view underneath a coat of paint.

Birch for interior finish is one of the woods that has not been properly appreciated by all housebuilders, and from an architectural point of view it is a wood that has great possibilities, but few of which have been realized. It is not so expensive as oak, ash, and walnut, and its use outside of the cabinet trade has always been more or less limited. There are three kinds of birch which can be used successfully for interior finish—plain white birch, curly birch, and plain red birch. For interior decorative effects the red birch has almost as great a value as some grades of mahogany. It is rich of tone and figure, and at the same time so firm of texture that it requires no filler to make it produce a lustrous polish. It is a wood that is easily worked by carpenter's tools, and when properly dried it does not warp or crack. A good deal of the birch cut, however, shows cracks in the tree, and therefore selection is essential to success. Birch lumber is very plentiful in New England and the Eastern States, and also in Michigan, Minnesota, and Wisconsin. Consequently birch is cheaper than plain oak or ash, and about as costly as maple. Curly birch, on the other hand, is scarce and its price high. Curly birch has a rich chocolate brown finish, and is often as effective as mahogany, but white birch has a light finish, and plain red birch a darker shade. The white and red used in combination produces a quiet and dignified finish that is very attractive in a home where mahogany would be out of place. The decorative effect of these two shades of the wood is as striking as the cheerfulness of the tone. In durability birch will hold itself with any wood, often outlasting oak and mahogany, and always retaining its colors. In birch paneling, wainscoting, and doors the effect is always rich and soft. When the cost of birch is considered, along with its other qualities, it will be acknowledged to possess a degree of usefulness not well appreciated to-day.

Spruce and hemlock for interior finish are woods that for years have been neglected, but owing to the increasing cost of hard pine and oak they are being employed more and more for this purpose. Spruce is susceptible of a very high and beautiful finish, either in natural color or stains. Washington spruce in particular has been found in recent years to yield desirable results when properly handled. Piano and

organ manufacturers have become large users of the spruce cut from the forests of the State of Washington. It is probably as free from checks, sap, knots, and flaws as any wood found, and if properly dried it does not swell or shrink to any great extent. Neither hemlock or spruce have ever stood high in the opinion of architects for interior finish owing to their lack of grain and individual expressiveness. In this respect the two woods stand with white pine. But in our modern developments of stains and paints it is possible to secure results in interior finish that are independent of the grain of the wood. The chief thing is to secure a wood that is durable, free from defects, and which will not crack and warp. Then if stains can produce good effects the result is highly satisfactory.

This is largely the case with spruce and hemlock. They are woods that require stains to bring out their best qualities. It holds true of nearly all of our soft woods, and as we must adopt these woods more and more in interior finish a word about the modern methods of treating them with stains is important.

Stains of all shades and colors are obtainable to-day, and they are made to imitate different woods so well that they deceive all except an expert. Furniture and cabinet makers are the best workers in stains and varnishes, and they produce effects which have been considered almost impossible in household trim. The reason for this is that an article of furniture is treated to what is called "the fuming process" in a room by itself. The wood is exposed to the fumes of ammonia, acids, nitrate of silver and other chemicals. In this way effects in staining are obtained that seem well nigh impossible in the trim of a house. A greater variety of beautiful shades can be obtained with stains in the hands of a piano maker than nature can imitate in the natural woods. Even plain water stains made from various chemicals can be used in this process with good effect, and the acid fumes tend to fix them in durable colors.

As a rule the old-fashioned oil stains are used on oak or ash if only the light effects are desired, but for golden and dark oak asphaltum is often used. But, of course, to produce fine golden oak effects an expert in colors must be employed. Permanganate of potash is used to get the reddish brown effects, a solution of sulphate of iron to produce good bluish gray, and white flakes of asphaltum for light streaks. To imitate golden oak effects on the trim of a house would therefore be effective but somewhat costly, and dependent for its success chiefly upon the skill and ability of the workmen. Architects who have had certain library rooms finished in golden oak have often been disappointed in the results, and have later changed the wood to dark or Flemish oak. Mahogany and cherry effects are sometimes obtained on light woods by washing with lime water, and then removing with vinegar or a weak solution of acetic acid. This ages the wood very rapidly and produces rich cherry and mahogany effects in soft woods, which later, when varnished and rubbed down, are quite striking.

Effects in stains can be obtained on light woods often with the most simple materials. It is the art of applying them that determines their value. For instance a much different effect is produced on brightly cleaned fresh wood than upon a surface that has been allowed to stand a while. The application of water to the surface before the stain is applied darkens it materially, so that desirable effects are obtained. If you wish the effect to be darker in places than in others this can be produced by painting the surface with clean water several

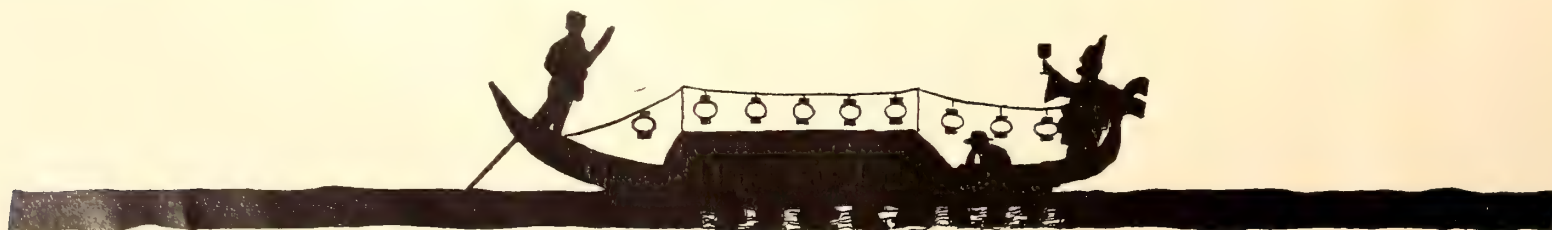
times, permitting it to dry in, and then applying the stain while still moist.

In the application of all the stains on light wood the first essential is to clean the wood properly, and either apply the stain to a clean dry surface or a clean moist surface. Then before it has dried the stain should be wiped off with a woolen rag. By wiping off the first coat clear effects are obtained which furnish a foundation for the succeeding coats. Cloudy, dull effects are produced by too much stain applied at first and allowed to dry in too much before being wiped off. A good many of the best stainers sandpaper after wiping the first coat, allowing the surface to get perfectly dry before applying the sandpaper. The chief thing is to produce a light, smooth body effect, and then a surface glaze of the right colors can be laid over. Combinations of water colors and oil colors are used by cabinet makers to secure their best effects, and then when protected by a glaze of shellac no change can follow.

Variety in interior trim is often desirable, and one finds in modern houses halls and vestibules of cypress finish, doors of poplar, and sash of windows and stairs of cherry, with treads of oak. To secure these effects in stains on light wood is not difficult, and if one uses judgment the result is almost as good as if the genuine woods were employed for the different purposes. The chief difficulty is in getting a painter who understands his work sufficiently to produce excellent imitations. Good men in this line are scarce, and some of them demand fancy prices, so that the economy in the cheaper wood employed is offset by the cost of treatment. A house owner who can mix his own paints or utilize the brush in applying stains can often do better than a cheap workman with no genuine sense of artistic effects.

The increasing cost of hardwoods for interior finish must in time bring about a better class of stainers and painters who can work up light woods into good imitations so that they will pass inspection. It is quite evident that imitations can be made almost perfect from the examples of this work produced in the piano and cabinet trades, but it requires experts who know the value of each touch and streak. Cheap stained woodwork is no better than a painted surface. Indeed, it is not so good, for its imitation stands out so conspicuously that all notice it. A painted surface makes no claim to imitation, and stands for just what it is. Staining is the work of an artist in colors and effects, and it has therefore a wide latitude for improvement.

Georgia pine is the easiest to treat with stains, for no attempt is made to imitate other woods with it. The idea is simply to bring out and intensify certain grain effects in the wood. A little oil, dryer, and light brown or yellow colors, thinned with benzine, are all that are required, and if applied to a dry surface, wiped off after standing a sufficient length of time, and then finished with another light coat and shellaced, the result is always pleasing, durable, and attractive. The great thing to do is to get the desired color without destroying the beauty of the wood. Good Georgia pine is a beautiful wood, and needs no apology or attempt to imitate other woods, but proper treatment of it makes a wonderful difference. The same wood in the hands of a poor workman looks like an inferior imitation and never gives satisfaction. A good deal of good pine is thus spoiled to-day in the finishing, and probably not a little of the condemnation of inferior grades of this lumber is due after all to bad workmanship in finishing off the surface of the wood when put in the house.



The Residence of Professor L. W. Reid

Haverford, Pennsylvania



THE picturesque and interesting residence of Professor Reid forms the subject of this sketch. The farmhouse, of the Pennsylvania type, is the example which was accepted by Messrs. Bailey and Bassett, of Philadelphia, when they designed Professor Reid's house. It is constructed of rock-faced graystone, laid up with broad white mortar joints. The entrance porch is placed at the front of the house, and is separate from the living-porch, which is placed at one end of the house.

The roof is of wood, with the exterior covered with shingles which are finished in their natural state. The trimming and the solid wooden blinds which are placed at the first floor windows are painted ivory white, while the remainder of the blinds are dark bottle green.

The entrance door opens direct into the hall, which is finished in the Colonial style with white painted paneled wainscotings and trim and a stairway with a mahogany balustrade. A commodious closet is conveniently placed under the stairway. The walls above the wainscoting are treated

with an old-rose wall decoration very admirably worked out. The reception-room, to the left of the entrance, is treated with a low Colonial wainscoting, painted white, and above which the walls are covered with a two-tone green striped paper finishing with a heavy molded cornice.

The living-room is trimmed with Flemish oak, and has bookcases built in and an open fireplace with tiled facings and hearth, and a mantel of good design. The walls are treated with a mustard-brown color, harmonizing well with the soft brown tone of the trim of the room.

The dining-room, which is connected to the living-room and also to the hall, is treated with a golden-brown oak effect and with a tapestry wall covering. There is a low wainscoting and an open fireplace, with brick facings and hearth, and a mantel complete. A door opens into a butler's pantry, which is provided with sink, drawers, dressers and cupboards complete. Another door opens into the kitchen, which is placed in an extension, with windows placed on two opposite sides of the room, thereby insuring a cross ventilation. It is fitted up with an ice-box, with an outside entrance



The Design Is Based on the Farmhouse of the Pennsylvania Style



The Main Doorway and Entrance Porch



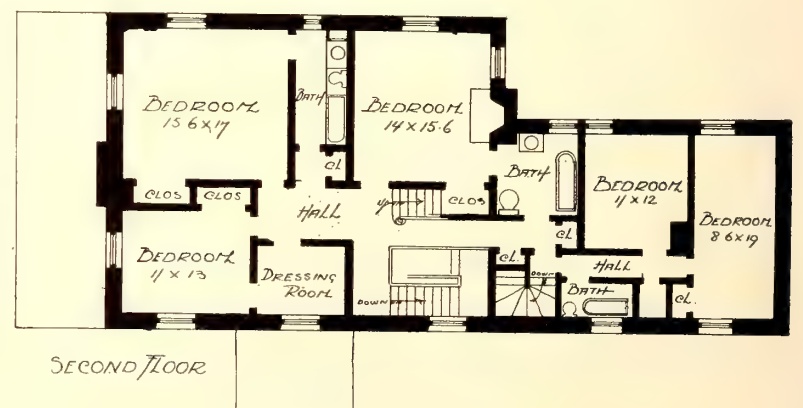
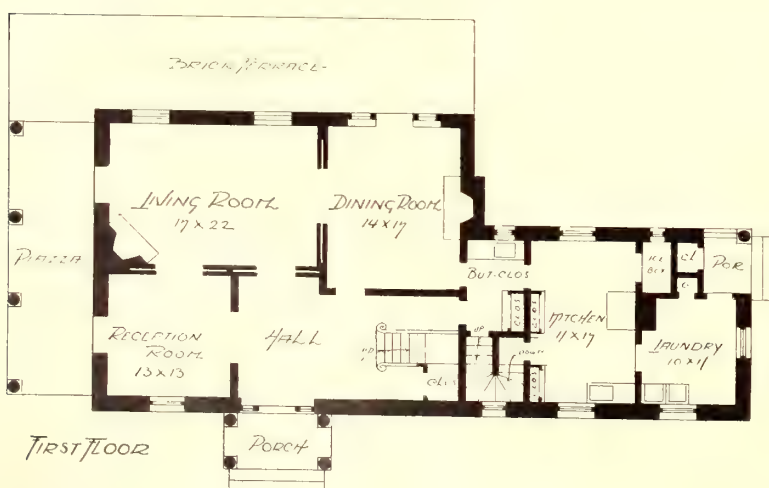
The House Stands Endwise to the Road

thereto, which precludes the ice-man from entering the house. It is also fitted with a sink, store pantry, dresser and a range. The laundry, which is off the kitchen, and is also used for a servants' hall, is fitted with porcelain wash tubs. It has a broom closet and a door opening onto the rear porch.

The second floor is trimmed with white pine treated with

The principle bathrooms have tiled wainscotings and floors, and are furnished with porcelain fixtures and exposed nickelplated plumbing.

There is a large den fitted with book-shelves built in and an open fireplace on the third floor. The treatment of the room is with red wall covering and black painted trim.



ivory white paint, while the walls of each room are treated with one distinctive color scheme. This floor is divided into bedrooms, furnished with all the necessary appurtenances. The owner's suite, consisting of two bedrooms, dressing-room and bathroom, are conveniently arranged; besides these rooms, there are one other bedroom, with private bath, and two servants' bedrooms and bathrooms, which are reached from the kitchen by a private stairway.

There is also two guest rooms and a trunk room on this floor. The heating apparatus, fuel rooms and storage room are placed in the cellar, which has a cemented bottom.

Professor Reid's house presents a successful treatment of a site which was treeless and in the open; the house is placed on a knoll ascending from the boulevard, which the end of the house faces, the house being placed endwise to the road, the main entrance seemingly being on the side.

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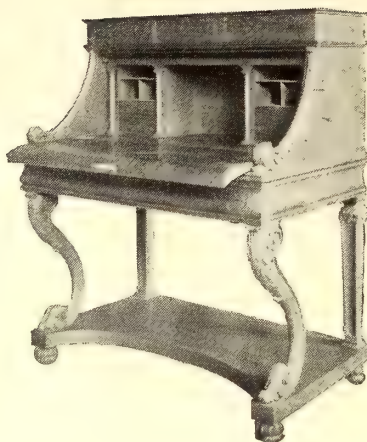
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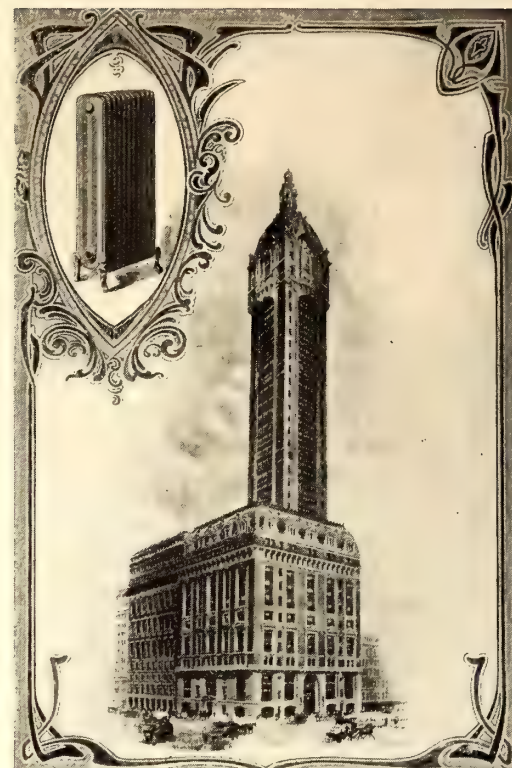
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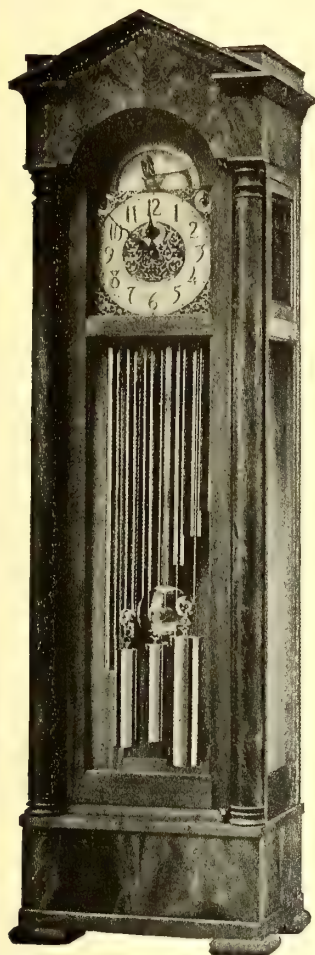
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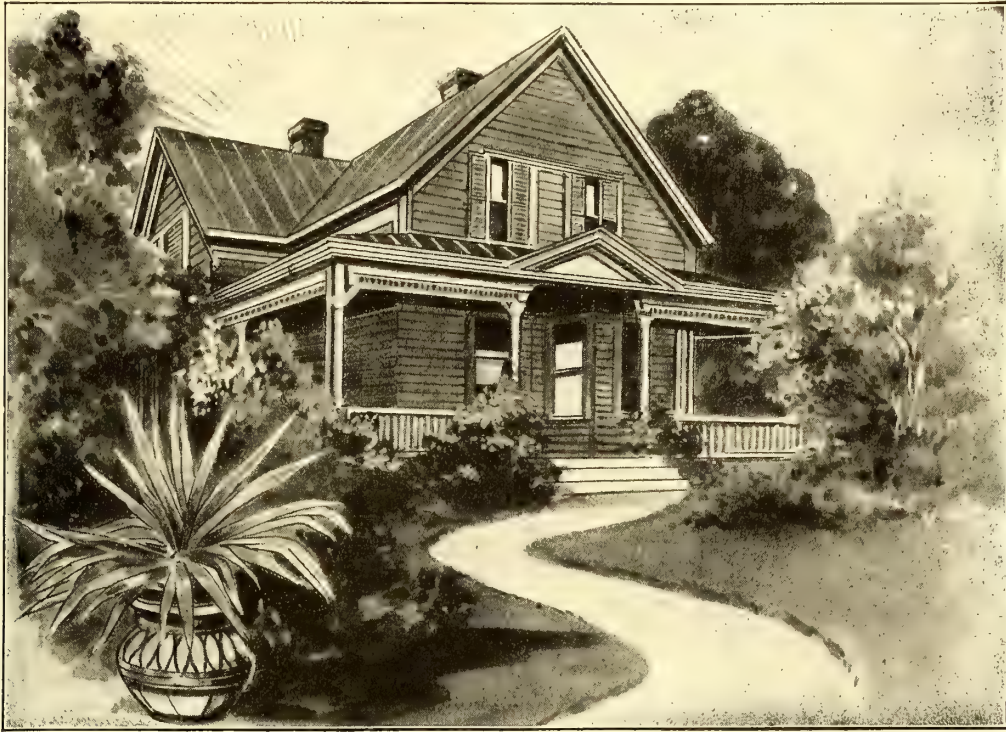
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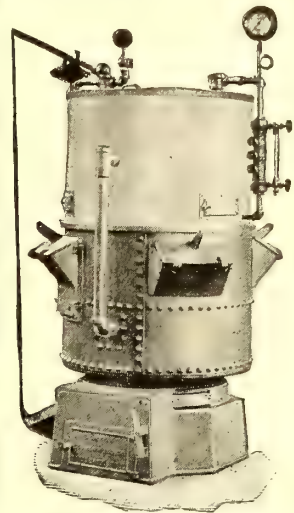
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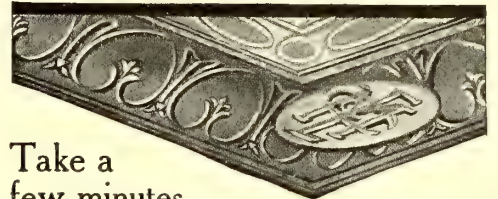
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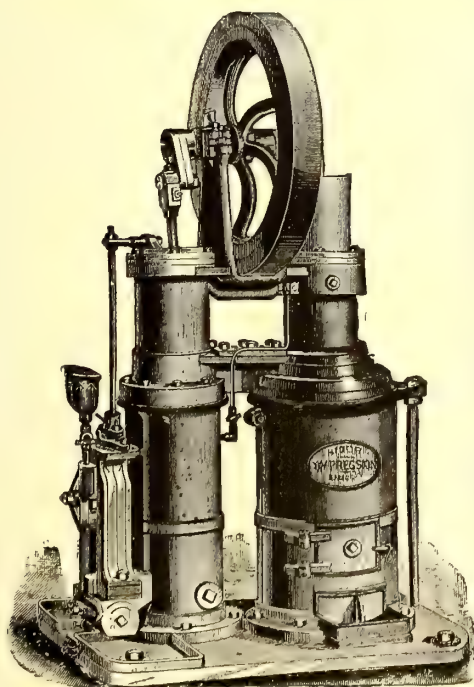


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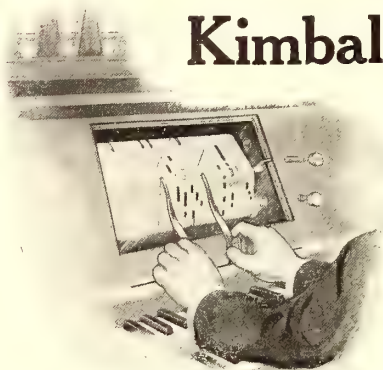
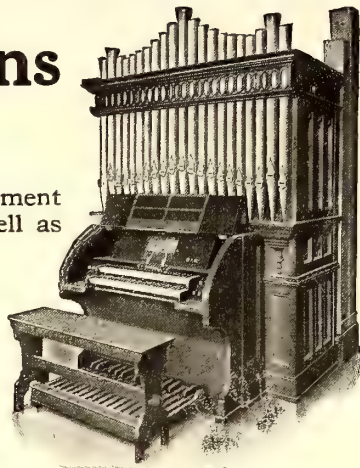
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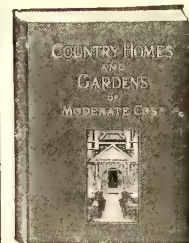
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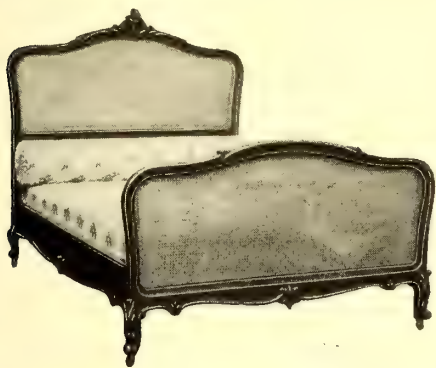


Illustration furnished by the Berkey & Gay Furniture Company, Grand Rapids, Michigan

ing examples still existing under the names of "Flemish" and "Jacobean."

French craftsmen being closely in touch with Flanders were familiar with cane treatment, but it was not until the next century that it achieved popularity in France. Furniture makers under Louis XIV worked on massive lines, giving prominence to a different mode of construction and ornament.

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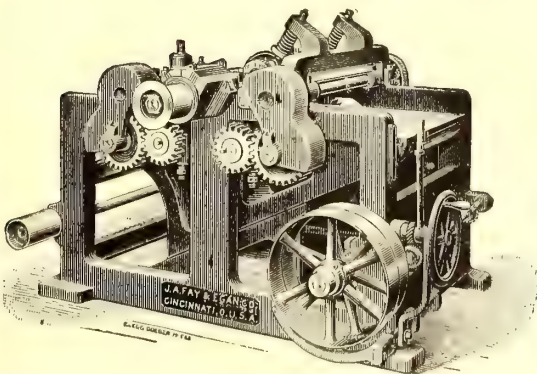
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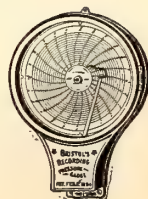
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COUNTRY HOMES AND GARDENS OF MODERATE COST. Edited by Charles Francis Osborne. Philadelphia: The John C. Winston Company. 1907. Pp. 120.

Not all the houses illustrated in this book, and there are two hundred pictures within the handsome green covers, can be designated as "moderate" in cost; but some of them come well under this head, and the seeker after moderate cost houses will find much of interest and value in its pages. The houses reproduced are, on the whole, of an unusually interesting character, many of them being representative examples of the best work of some of our most thoughtful and skilful architects. The text is especially valuable, some of the more important contents being an admirable discussion on choosing a site for the house, by the editor. President Frank Miles Day, of the American Institute of Architects, offers some helpful advice on choosing a style for the house. William T. Price makes a plea for choosing simple materials for the house. Fireproofing is discussed by Emile G. Perrot; the interior finish and furnishing is described by Margaret Greenleaf; W. C. Egan tells about planting about the house; John W. Hall writes on small gardens; W. P. R. Pember tells the reader what six thousand dollars will do; and Leila Mechlin presents some hints on wall decoration. In addition to these chapters there is a sufficiently descriptive text on the houses illustrated, but it is obviously a book to be read—and with profit—as well as to be enjoyed for its pictures.

COUNTRY COTTAGES AND WEEK-END HOMES. By J. H. Elder-Duncan. New York: John Lane Company. 1907. Pp. 224. Price, \$3.50, net.

This is an admirable book on one of the most important and pressing of contemporary architectural problems. How to build an attractive seeming house, that is, well built and good in itself, as well as good to look at, is a problem that has failed of general solution in America. In England conditions appear to be distinctly different, and this handsome and excellent book is fine evidence of the very superior work in this phase of housebuilding that is being done to-day in that country. As in all recent publications on dwellings, the houses illustrated vary considerably in cost, but the book treats, in a progressive manner, of houses costing from \$1000 to comparatively pretentious mansions costing as much as \$17,500. Unlike most other publications, however, the examples of houses costing from \$1000 to \$2000 are quite numerous, and those who are seeking models for low cost houses can not do better than consult Mr. Elder-Duncan's attractive pages.

And the singular thing is that the low cost houses are exactly as attractive in aspect as the higher cost ones. This is an astonishing reversal of the ordinary American rule, for in this country houses of very low cost rarely merit even a cursory examination. Here, however, is cottage after cottage, each possessed of most distinctive charm, and scarce one of which does not merit the warmest praise as a work of art.

To design a small house in an attractive way requires as much thoughtful effort and artistic instinct as more pretentious work. These English cottages show what can be done when the problem is attacked in the

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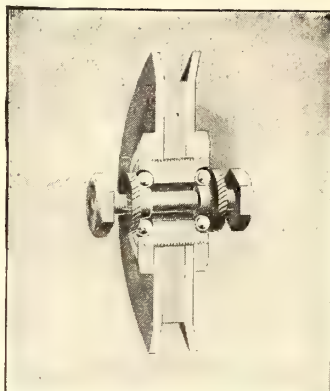
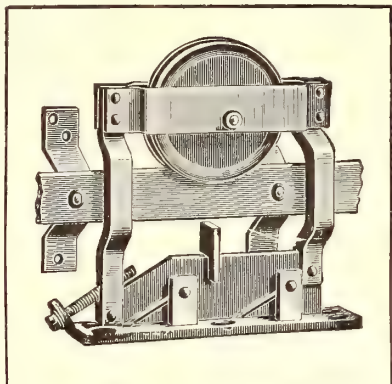
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right way and by the right people. If the low cost house in America is still an unsolved problem it is chiefly because it has not been attacked by the right designers. The present book is eloquent and convincing testimony as to what can be done in England, and it should not be as impossible as it seems to be to accomplish similar results in America.


Mr. Elder-Duncan's book is embellished with numerous plates. The illustrations are chiefly from photographs of the actual buildings, although a few architectural drawings are also included. The pictures are chiefly of exteriors, although interiors are not neglected, and the plans are given in every instance. The cost likewise is stated on the plates, except in those instances where it is inadvisable or impossible to give it. The text consists of two introductory chapters, with a special discussion of the question of cost. Descriptions—admirably brief and complete—follow of the various houses illustrated, and the volume closes with some notes on cottage gardens—confessedly brief—and a note on the professional charges of architects. Mr. Elder-Duncan's text, except in the purely descriptive passages, is both entertaining and suggestive, and his book is to be warmly commended in every way.

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By J. J. Cosgrove. Pittsburgh: Standard Sanitary Mfg. Co. Pp. 8+278. Price, \$3.00, postpaid.

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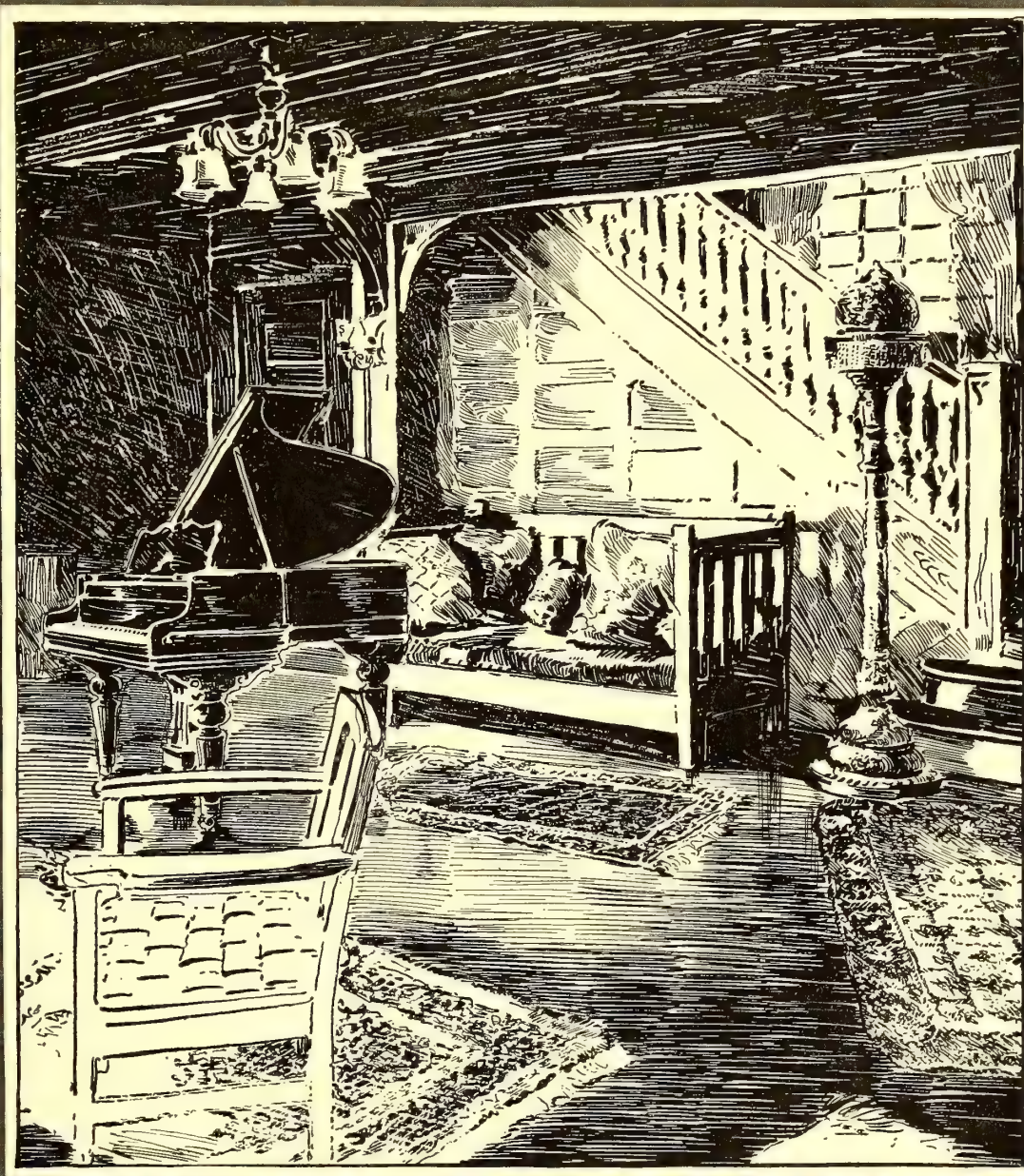
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GARDEN WORK FOR NOVEMBER

By Eben E. Rexford

ALL tender shrubs should be given protection now. It is not safe to put off the work longer, for freezing weather may come at any time. Get ready for the undertaking the day before, if possible, by having all needed material brought together upon the grounds. Choose a pleasant day for the task, if possible. One can accomplish as much again in a warm, bright day as he can in a cold, disagreeable one, to say nothing about the superior quality of the work done. Before laying down any shrub, cut away all weak branches, and all superfluous ones. There is no good reason for attempting to carry these through the winter. They will have to be got rid of in the spring, and at this season it is wisdom to do all that can be done to save work later on.

If a bush seems stiff and unyielding when you attempt to bend it over, remove a few spadefuls of soil from close to its roots, on the side toward which it is to be bent. This will generally allow you to lay it down without breaking it.

Having spread it out on the ground, lay some sticks across its branches to hold it down until your covering can be put in place. Cover it with dry soil if possible. Wet soil often does harm. If you prefer to use leaves, make a sort of pen of boards five or six inches deep about the plant. Press the leaves down firmly and cover them with something that will shed rain. If soil is used as a covering, let it be four or five inches deep, and roof it over well. Water must be kept out if we would have our plants winter safely.

Pansies do not require much protection. Scatter an inch or two of leaves over them, and put on some evergreen branches to hold them in place. Pieces of wire netting can be used if branches are not obtainable.

Hollyhocks seldom winter well unless water can be prevented from getting at their crowns. Their foliage is soft and thick, and absorbs moisture like a sponge. Decay soon sets in, and this diseased condition is soon communicated to the crown of the plant. Few plants survive after this takes place. I invert a box over each plant, filling in about it with leaves and banking up outside with soil. In this way I succeed in wintering nearly all plants safely. Plants not so protected generally come through in spring looking well, but before long they show signs of disease, and not one in a dozen survives.

Cover the bulb-beds with eight or ten inches of coarse litter from the barnyard. This will prevent heaving of the soil under the action of frost. In an unprotected bed bulbs will often be torn loose and greatly injured, if not ruined.

Go over the border and set stakes to mark the location of all plants that die away wholly in winter. If this is not done, they may be trampled to death in spring.

If any plants or shrubs have proved inferior, root them up and consign them to the rubbish-heap. We have so many excellent varieties nowadays that one can not afford to grow anything that does not have real merit. It is just as easy to grow a good thing as a poor one.

Mulch the peonies well. These plants are entirely hardy anywhere at the north, but they do enough better, when protected, to make it well worth one's while to give them this attention. All hardy plants are benefitted by covering, because it enables them to get through the winter without using up all their vitality in fighting against the cold.

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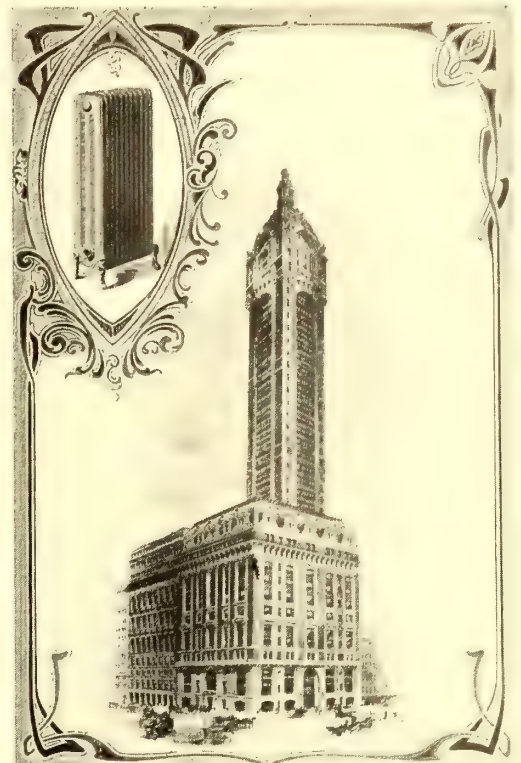


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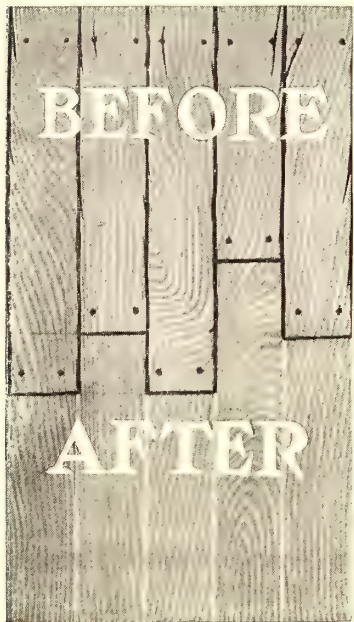
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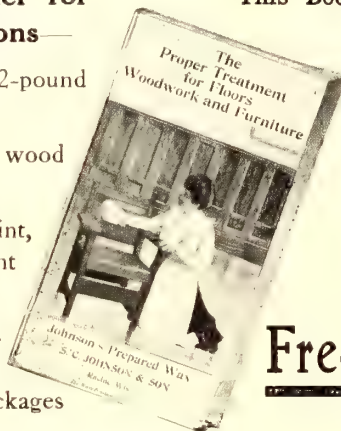
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ing it a top dressing of fine manure just before cold weather sets in. Spread it on generously. If barnyard fertilizer is not obtainable, make use of bonemeal. This is a most excellent substitute for cow-manure anywhere about the home grounds.

Celery for winter use should be dug up and stored in the cellar. Set it on the bottom, putting some soil about the plants to retain moisture. The rule should be to keep the roots damp and the tops dry.

Arrange now for proper ventilation of the cellar. More sickness originates in a cellar poorly ventilated and aired than from anywhere else. The vegetables stored there will be constantly decaying and giving off unhealthy gases, and these must be got rid of without allowing them to come in contact with the rooms above. It is an easy matter to arrange for the free escape of these noxious odors by connecting a tube of boards with a cellar window. The tube should extend upward several feet, in order to create a draft, also to prevent cold from entering. However, this precaution alone is not sufficient. The contents of the cellar should be looked over at least once a week, and every decaying thing should be removed. The best way to dispose of it is by cremation in the house furnace.

Keep watch of the dahlias, cannas and caladiums after storing them in the cellar. If mold is discovered, you may be sure they are in too damp a location. Remove to a dryer place. Generally a shelf near the ceiling will answer the purpose. I find it a good plan to spread the roots out on wire netting. This allows a free circulation of air about and among them. Spread them out in such a manner that they do not touch each other. If they seem inclined to dry up and shrivel too much, take it as an indication that a somewhat damper place is needed. If any portion of them begins to decay, cut the diseased part off promptly. This may prevent the trouble from being communicated to the rest of the bunch. But if it does not, throw the whole bunch away, as soon as you discover its tendency toward unhealthy conditions. Better lose a few roots in this way than to attempt to save them and have all the rest suffer in consequence.

I have found it a good plan to wrap canna roots in oiled paper before storing them in the cellar. This keeps them in about the proper condition of moistness. But before putting them away—and this applies to all cellar-stored roots—be sure to have them well ripened off by exposure to the sun. I aim to leave the roots of my dahlias, cannas and caladiums exposed to strong sunshine several days after digging them before they are placed in winter quarters. This allows surplus moisture to evaporate and puts them in proper condition for wintering safely. Put them in the cellar immediately after digging them, and not one in fifty will survive the ordeal.

Be chary of fire-heat in rooms containing house-plants recently brought indoors. The danger of keeping them too warm far exceeds that of keeping them too cold at this season. Also be careful about over-watering. Few plants will be making much growth now, and when a plant is standing still, comparatively, it needs very little water. Evaporation will take place slowly, therefore a small amount of water, applied two or three times a week, will be amply sufficient throughout this month and most of next.

Give no fertilizers until your plants begin to grow.

But give all the fresh air possible. If the weather is bright and warm, leave the windows open from nine o'clock to three each day. Plenty of fresh air will be a most im-

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portant factor in putting your plants in good condition for winter work.

Look to the potted bulbs. If any have begun to make top-growth, put them in the window. But leave those which have not begun to grow in cold storage as long as possible, if you want to prolong the period of their flowering.

CONSTRUCTION AND CARE OF THE HOTBED

By Ida D. Bennett

TO ENDEAVOR to garden without the promoting aid of a well-constructed and equipped hotbed is to be seriously handicapped in one's gardening operations throughout the summer, as its use advances the season, from six weeks to two months being gained in the maturity of the plants set out. Take, for instance, that popular flower the cosmos, the growing of the larger varieties of which is practically futile without the hotbed, as, planted in the open ground in May, after all danger of frost is passed, they will not come into bloom before September, when the first frost catches them in their first blooming. But if the seed is planted in the hotbed late in March or the first of April they will frequently be in bud when transplanted from the frames to the open ground and continue to bloom all summer.

The hotbed has its phases of opulence, where it appears in walls of brick, or stone, or cement, with the regulation florist's sash, or it may owe its humble origin to waste lumber about the place and discarded window-sash. There are certain advantages in the more solidly built masonry as compared to the timber construction, in that it affords a more even temperature and successfully resists the incursions of moles, mice and like vermin; it is, moreover, permanent—a pit lined with brick or concrete, well constructed and carefully drained, should last twenty years, while the light frame construction will not be good for more than three.

If built of boards the material should be as heavy as possible and entirely free from knot holes, or if such holes unavoidably exist, they should be masked with pieces of tin nailed on. A few such holes in an old hotbed of mine a few years ago resulted, one night, in the almost total loss of the entire sowing of seeds, a mouse having in that time unearthed and eaten all the salvia, and other hard-shelled seeds, and left the empty shells scattered over the surface of the soil.

The first essential in constructing a hotbed is a pit, which should be about four feet deep and of a size to correspond with the sash to be used. The sides should be left as even and firm as possible. The frame of the bed is constructed—if of boards—with four corner posts of three-inch stuff, the rear posts being about six or eight inches higher than the front ones; onto these the sides and ends are securely nailed, the bottom of the frame being square, the slope being at the top. Usually if the frame is made of six or eight-inch boards, by sawing one end board in two on the bias it will provide the top boards for each end, and be on the right slope. Where old window sash are used it will be found convenient in handling to hinge them to the back of the frame, which they should cover snugly.

The construction of permanent beds of masonry is along practically the same lines; the pit, however, should be dug about four inches larger to allow for the laying of the brick or cement. Where concrete is used—and this is probably the most permanent form of hotbed—a rough frame of boards should

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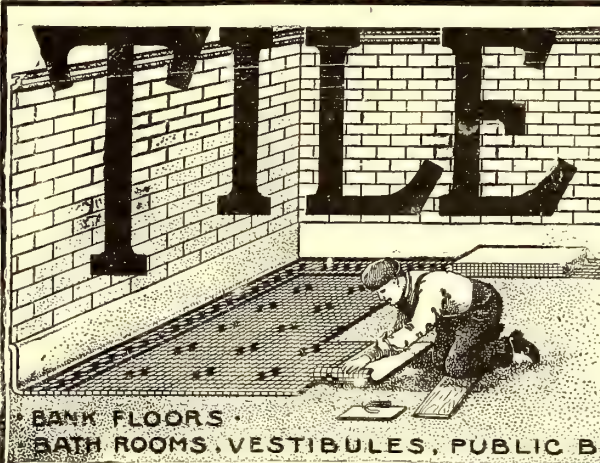
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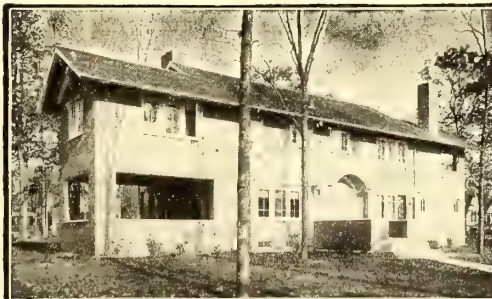
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be made to form a mold; it need not be more than a foot or eighteen inches high, as it can be raised as the concrete hardens. Pebbles, sharp sand and broken stone, in the proportion of seven parts to one of cement, well mixed, are used for the body of the wall; it should be added a few inches at a time and well tamped down, until the mold is filled. If the frame is of the full height of the pit the wall may be built at one time, but where a low frame is used it will be necessary to let each tier of concrete "set" before adding the second tier, or the tamping of this will cause the wet concrete to bulge.

Two inches of the top of wall and the face of the wall should be made with a higher grade of material—sharp sand and cement in the proportion of two to one. In the top of the wall a wooden frame for the sash to rest on should be cemented in. This need not be more than an inch or two wide or high, simply something on which the sash may be hinged or fastened, but the sinking it in the mortar renders it permanent and air and water tight.

No floor is required in a hotbed, and every effort should be made to secure good drainage. Where the natural lay of the land does not afford this, it will be well to sink a tile or even a deep hole filled with broken stone in one corner of the hotbed, the top being level with the surface of the soil or slightly below it.

All hotbed sash should be well glazed and painted and fit as nearly air tight as possible. There should always be sufficient slant to the sash to shed water, and the direction, wherever possible, should be toward the south. It is of first importance that the beds be protected on the north from cold winds, and hence a position on the south side of a building or wall is desirable.

Having completed the frame and installed it in the pit, the next thing is to get it in working order as soon as possible; for this the pit should be filled with fresh manure—that gathered over night from young grain-fed horses being best—never use manure that has lain more than a few hours, and the fresher the better. It should be put directly in the pits, filling them full and pressing down somewhat so that the pit will be quite evenly filled; place the sash in position and wait for fermentation to begin. Usually in twenty-four hours the mass will be in a violent state of heat, and may be pressed down and the soil added. In tramping down the manure it should be made as level as possible and quite solid. The manure should contain a liberal quantity of bedding—leaves or straw—as this furnishes fuel for the fire of the manure and insures the continuance of a steady heat for some time, while clear manure would produce a violent heat at the start which would soon die out, leaving the beds cold.

When the manure is in a thorough state of fermentation in every part of the bed, and has been trampled down, an inch or two of old, well-rotted manure should be added evenly over the surface. This serves as food for the young plants and prevents their sending roots down into the fresh manure underneath, which would burn and destroy them. Over the old manure place about four inches of good garden loam mixed with a little leaf mold if procurable; the surface inch of soil, at least, should be sifted and made very fine; the soil should be moist enough to sow the seeds, but neither wet or dry.

In sowing the seeds it will be found desirable to divide the bed—if there is only one, with a partition, that plants requiring a high temperature may be planted by themselves and those requiring less heat—as cabbages and cauliflowers—by themselves. It is not well to try to grow cabbages and cauliflowers and tomatoes and peppers under exactly the same

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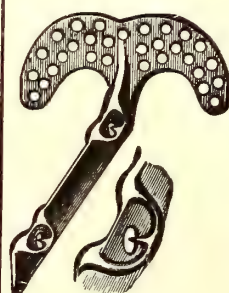
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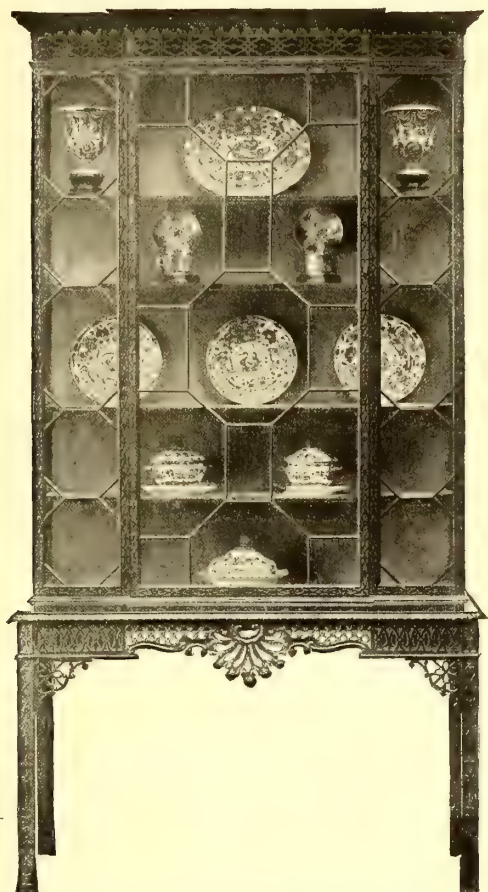
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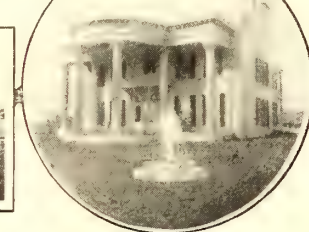
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conditions, as their requirements are quite different.

Seeds that germinate at about the same time should occupy as far as possible the same hotbed or section; tall growing varieties should be planted against the back of the bed and not in front of low growing varieties. Each section of seeds should be separated from adjoining sections with thin strips of wood which should extend slightly above the surface of the ground. All should be plainly marked with the name and date of sowing, and, where known, the period of germination, and where any single variety of seeds are purchased from two or more florists it will be well to add the name to the labels, as in this way one may keep tab on the different florists' seeds and judge of their merits.

Fine seeds should be sown on the surface of the ground and covered lightly with soil or fine white sand, the latter being preferable, as it is not so apt to be affected by fungoid growths. A piece of flat board with a handle on one side should be used to press the seed into the ground and should be of a size to go within the different plats.

Coarser seeds, as the salvias, pansies, asters and the like, should be covered somewhat heavier, or they may be sown in drills of an eighth of an inch deep and the soil drawn over them and pressed down with the board. Large seeds should have a corresponding depth of soil over them, but no seed will require the deep planting of seeds in the open ground exposed to sudden changes of the weather, heavy rains and baking sun.

When the seeds have all been planted and labeled, water with a rubber plant sprinkler or with a whisk broom dipped in water and shaken lightly over the soil—never pour water from a cup or other vessel or use a watering pot unless the rose is fine enough to throw an almost mist-like spray; cover with newspapers, close the sash and leave until germination takes place. As the various plats of seeds germinate and form leaves the newspaper should be removed from so much of the bed and placed on the top of the sash directly over them. Air will be required by the newly started plants, and the sash may be slightly raised on warm sunny days, taking the precaution to protect the opening on the windward side with a rug or bit of carpet. Should the sun go under a cloud when the sash is open it should be closed at once; but should the sun come out brightly when the sash is closed it will be necessary to inspect the beds and ascertain if the temperature is rising beyond the danger point, as the temperature rises very rapidly inside the sash under the combined influence of the sun and fermenting manure, and an hour's neglect under these circumstances will sometimes result in the loss of the entire contents of the hotbeds.

The beds should be well protected on cold nights and windy days with rugs or old carpets, and there will often come a spell of wet, cold weather when the glass will require to be shut continuously for days at a time. This is one of the trying times with the hotbed, and it often taxes the gardener's ingenuity to keep the plants from damping off under these conditions; the best remedy is the "ounce of prevention," and it will be well not to water, especially at night during cloudy or unsettled weather, unless actually necessary.

When the plants are up and growing vigorously it will be well to remove or open the sash during the middle of the day, and lath screens, made by tacking laths to a frame of any light stuff of a size to fit the beds, should be placed over the beds to protect the plants from the sun, and from marauding cats and dogs. The laths should be about their own width apart, and if the nails with which they are nailed to the frame are clinched on the

under side, they will last for years. Later, as the plants approach a stage when they will be soon transferred to the open ground, they may be given complete exposure and screens of chicken netting may be used in place of the lath if necessary to protect the beds from poultry, cats and other enemies.

Tender plants should not be set out in the open ground until all danger of frost is passed, as there is nothing gained by planting before the weather is warm and the ground in a condition to receive them.

THE BIGNONIA RADICANS

By Benjamin Ide

EVERY year at the time of the blooming of the *Bignonia radicans* or trumpet vine I am impressed anew with its exceptional value as an all-around plant for general purposes. It is a matter of the greatest surprise to me to see this noble plant so neglected and relegated to any out-of-the-way corner of the yard when so much may be done with it in the way of decorative effect. The explanation of this unfortunate state of affairs may probably be found in the fact that we have always had it with us and that familiarity breeds contempt.

So we relegate it to some out-of-the-way corner while we point with pride to some sickly climber, the cultivation of which we know nothing about and ask that its spindly growth be admired; it is a question whether we admire it ourselves, but the catalogues call it beautiful, and so great is the tendency to adopt ready-made opinion that we hold our own in abeyance and accept without question.

As a vine the *bignonia* is fine when well cared for and well supported; it requires, however, the most careful fastening as well-developed specimens are very top-heavy, and a storm is apt to tear them from their support and do much damage.

The *bignonia* is one of those plants which make fleshy air roots at each joint which cling to walls by suction; where these have been allowed to remain undisturbed the plant is practically self-supporting, but the large, heavy top which it forms when it has reached any considerable height is composed of many branches, which either form no roots at the joint or the roots finding no point of attachment wither and die, then a severe storm catches the top, rendered heavier by rain, and tears top and all from its support. No ordinary means of support, as twine or light wire, suffices to sustain it under such circumstances, but a good weight of galvanized wire should be used, passing the wire under and around a joint and fastening the ends securely to the wall with staples.

But it is as an ornamental shrub and hedge plant that I wish to discuss it. In the entire range of ornamental shrubs suitable for the lawn it would be difficult to find one with more to recommend it in beauty, grace, hardiness, with its great masses of flowers and dark, rich foliage. Planted on the lawn and trained against a stake four or five feet, or as tall as it is desired to have the standard grow, it will in a few years develop a stem that will be self-supporting.

When it has grown to the desired height it must be topped or cut back and encouraged to develop many side branches—all side shoots below the top being removed as they appear and the whole strength of the plant directed to the formation of a symmetrical, vigorous top. In this way it will grow in the shape of a *Kilmarnock willow*, and if the seed pods are removed as they form it will be in bloom the greater part of the summer—which can be said of few other shrubs.

In a few years, or by the time the support has rotted away, it will have developed a trunk heavy enough to support it; one growing in my own grounds has a trunk equal to a young



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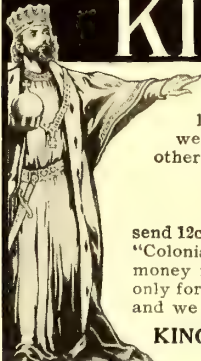
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tree and a top which in its season of bloom is a thing of beauty.

As a hedge plant nothing more highly ornamental could be desired for the boundaries of lots or for a division between different parts of the grounds. Set plants three feet apart in the row, training to stakes as for plants on the lawn. Top when at the desired height and allow to grow and droop sufficiently to form a screen. If it is desired to use it as a hedge to confine chickens or farm animals it may be grown against wire netting or fencing of sufficient strength. Nothing finer for a permanent screen for the poultry yard could be desired and the shade afforded will prove most grateful to the poultry.

Once established there will be no danger of the chickens injuring the stems and roots, as would be the case with more tender plants, and there will be no occasion to worry about its safety, be the winters ever so severe and the summer's droughts however trying.

Where the plants have been allowed to seed freely, every spring will see many new plants springing up around the yard which may be taken up and set out for a hedge. Do not, I beg, dig them up and throw them away or cut them off with the lawn-mower, but find some place where they may be given care and trained into some form worthy their great possibilities.

Although able and willing to grow with a modicum of care and trouble, they well repay the outlay of time and care, and when grown as an ornamental plant they should receive it.

Plant in good mellow loam, dug deep, that they may send their roots well below frost line. Give a heavy mulch of old manure in the fall, which may be dug into the soil in the spring. If there is any bare ground around the stem a mulch of lawn clippings will be of benefit during the hot weather, and an occasional showering during a protracted dry spell will in no wise injure it. Like all plants, keeping the foliage clean will greatly enhance its beauty.

Not the least of the bignonia's good qualities is its attraction for the humming birds, which flit around it from morning to night, diving head-first into its deep rosy throats, gathering honey for their nestlings, or sit on the branches preening their feathers as fearlessly at home, in spite of my presence, as though I, not they, were the intruder.

Some variety of the bignonia is indigenous to nearly all countries. Our native variety has its habitat in Florida and as far north as the Carolinas, where it disputes possession with the corn and thrives under the cultivation which seeks to eradicate it.

Under the name of Tacoma Stans, Florida furnishes another variety of handsome shrub covered in the autumn with handsome yellow flowers, while from Australia comes a lovely white variety with rose-colored throat—the Tacoma Jasmanoides; this is said to be entirely hardy at the South, and possibly with proper protection might prove so at the North.

South Africa furnishes a magnificent variety with a large, showy, trumpet-shaped flower of a bright, rosy lilac and darker pencillings and a blotch of yellow in the throat; the individual flowers are larger than the Bignonia radicans, and are borne in great panicles a foot or more in length. This, too, is hardy in the South, and in the North can be lifted and stored during winter in the cellar, conservatory or greenhouse.

Another interesting species from Australia is T. Smithii. This grows in a dwarf form like a geranium, and is well adapted to growing in pots. It is covered with flowers, two inches or more in length, of lemon and orange. This variety can be grown from seeds, and under favorable conditions is said to bloom the first summer.

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CHARLES ALLEN MUNN, President
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FREDERICK CONVERSE BEACH, Secretary and Treasurer
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"Shorelands": Marble Statues at the Base of the Steps to the Sunken Garden

AMERICAN HOMES AND GARDENS



Volume IV December, 1907 Number 12



"Shorelands"—The Wings Form an Open Court at the Entrance Front Where the Solid White of the House Is Very Agreeably Relieved by Plants and Flowers

Monthly Comment



THE very newest things in hotels—the modern American hotel, if you please, which leads in so many things—relates to its exterior. For years the American public has been trained to look for the utmost development in comfort and luxury in the mammoth caravansaries which are alike the wonder of the people who frequent them and the source of colossal fortunes to their proprietors. But this development, this comfort and luxury has, until now, been chiefly confined to the hotel interior. Now, however, a new kind of outside utilization has been found with charming possibilities of future growth. And it relates to the roof; not a new kind of roof, nor a strange new shape; not a new roofing material, but nothing more nor less than an Adirondack camp in the very heart of a great city, and perched upon the apex of the roof of a great modern hotel! There is progress for you, and thrift and novelty! Surely nothing more remains than auto-balloons—if that be the correct name for these new-fangled things that swim through the air—to enable one to sleep nearer the clouds than convention and appliances have hitherto permitted. Yet the most remarkable thing in connection with this new idea remains to be told, for this marvelous roof-camp has been established and put in operation in no less a place than the good city of Philadelphia! And there are some people who think the Pennsylvania metropolis is slow!

THE creation of the thing is so easy it is a wonder no one ever thought of it before. All that is needed is a few trees and some tents. The trees are stood around in tubs and boxes in such a way that, if they do not actually suggest a forest, it is at least thoroughly apparent they are trees. Then as much of the remaining space as possible is filled with tents—real tents—the simplest kind of furniture is installed, and nothing more remains to be done than to secure the necessary sleepers and collect their bills the next morning. It is simply too easy for anything. But what are the hotel men going to do with their expensive heating plants once they have accustomed their patrons to the new outdoor quarters?

NEW ideas frequently find a space in the public press to which they are not entitled by their actual merit. It is a singular feature of modern journalism that anything the least out of the way is given space, while nothing is ever heard of the quiet orderly affairs with which most people are concerned. This condition is doubtless due—the suggestion is made with some diffidence—to the young and tender age of the modern reporter. This very youthful person—who, as likely as not, is wearied of life before he has really begun it—seemingly thinks that anything that smacks of novelty must have real merit if for no other reason than that he himself has not heard of it. It is difficult to account on other grounds for the notoriety given to the New Jersey father who thinks he has discovered a new way to bring up his family. Perhaps he has.

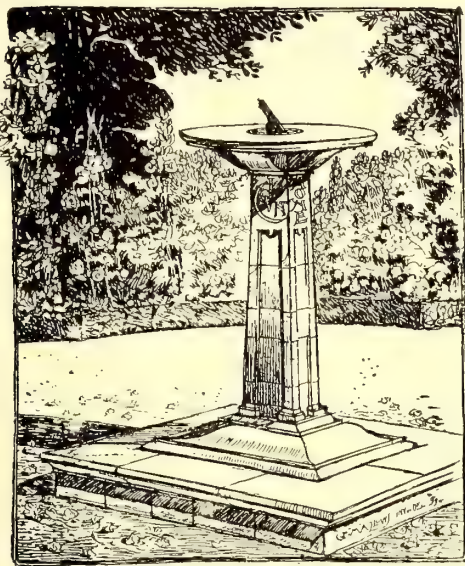
LIKE the Adirondack camp on the hotel roof the thing is simplicity itself once you know how to do it. For this gentleman has done nothing less than build a bungalow adjacent to his house and turned his family of half a dozen boys out into it to live their life! Beautiful, isn't it, and so amply buttressed with common sense, with parental love, with fatherly guidance and care, with taste and good behavior, with all the things that go, or ought to go, to make home

life good and true and ennobling? Just look around you and think what would happen if any six boys you know were to be camped out in a house of their own to take care of and to grow up in! It is certainly sad to think of a father who can't keep his own boys in his own house.

THE charges for professional services are a constant source of annoyance and misunderstanding on the part of the persons called upon to pay such bills. The person rendering the bill never has the smallest doubt as to its righteousness, and if he is permeated by any qualms it is because the very largest amount he summons up sufficient courage to put down is, after all—in his opinion—much too small for the work done or the value of the services rendered. Architects, for many years, have sought to adjust any differences that might arise from their charges by the adoption of a uniform percentage scale. It is a system that has many drawbacks. If the building is very large, the cost running up into the millions, the architect receives a fee that he himself regards as excessive; else why a running reducing scale when the cost is enormous? On the other hand, if the cost of the building is small, the actual amount to be received by the architect is so very insignificant that he has no financial inducement to do the best he can. And every one, of course, knows how very stimulating a substantial financial emolument is to excellence of service.

EXTRA charges for work other than the mere planning, designing and superintendence come, therefore, to the rescue of the architect. Being honorable men they never overcharge, thus being easily in a wholly different class from the butcher and grocer, who are never disturbed by any little mistake they may make in that direction. Moreover, the architect is buttressed, fenced in and supported by a printed schedule of charges, approved, decreed and commanded by the loftiest organization of his noble profession, specifying and requiring just such charges as he has put into his little bill. All these matters, moreover, are established by custom, which in such cases has quite the force of law. There is really nothing to do but to pay the architect what he asks, and that which he shows is established by the laws and customs of his profession, business or art, according as he or his client may view his occupation.

THE ingenious architect may sometimes work in an extra charge that no one has previously thought of. The person who does so is a real benefit to his profession and is entitled to a monument as high as that which adorns Bunker Hill. Some such structure must surely be erected to the genius who, among other charges, put in a substantial sum for a quartette of musicians! It is easier to imagine than to put down in print the various sounds, expressions and exclamations that must have been emitted from the client's mouth when this delectable item struck his eye. And it is quite as easy to imagine the cyclonic wrath with which an explanation was demanded. But the ingenious mind that had thought up this charge was equal to the emergency and was ready with the reply. It could not have been otherwise, seeing he was an architect and concerned with the creation of ingenious devices and arrangements. He put on his most polished manner—a covering easily worth ten per cent. extra—and blandly pointed out to his outraged employer that he had indeed hired a quartette of musicians in connection with the new house, and that it was to test its acoustic properties!



Notable American Homes

By Barr Ferree

“SHORELANDS,”
the Seaside Villa of Henry Seligman, Esq.,
Elberon, New Jersey



SEASIDE property which is bounded on one end by the principal driveway of its town, and on the other by the Atlantic Ocean, and contains within it vegetable and flower gardens, lawns and tennis courts, a lodge, stable and bathing pavilion, while the mansion itself is amply secluded within spacious stretches of grass, possesses some elements of novelty and many properties that lend themselves to delightful and charming treatment. Such at least are the salient features which Mr. Seligman's house, designed by Mr. C. P. H. Gilbert, architect, of New York, at Elberon immediately offers to the visitor.

The roads limits of the place are defined by chains, fas-

tened to posts of interesting design, with two lofty columns at the driveway, surmounted by globe-lights. To the left is the lodge, a pleasant two-story, flat-roofed structure with wings of one story. The space between it and the entrance driveway is filled by a lovely garden of the gayest-blooming flowers. On the right is the stable, a structure whose identity is at once proclaimed by its central covered court, but which, being designed in harmony with the other buildings on the property, has, save for this feature, little of the outward characteristics of such buildings. Both structures, as well as the house, are of wood, painted white, with blinds of Indian red. The grounds are beautifully hedged here, and within them is the vegetable garden, arranged in blocks and groups, and having a true ornamental character of its own. The land



The Sunken Garden Lies Below Brick Walls Surmounted with a Handsome Balustrade



A Pair of Doric Columns Marks the Entrance to the Grounds

beyond stretches away in ample lawns to the house, which, while by no means situated at the furthest extremity of the property, is located at a considerable distance from the outer highway.

A splendid curve brings the carriage directly before the entrance portico. The house is H-shaped, with a central body and wings at either end, projected on the entrance front. Across the middle is a covered porch, with a projected center, and which at each end is connected with the terraces that are carried all around the house. These terraces, on the entrance

front, have their own separate steps. At the base of one are carved sphynxes of marble; at the base of the other are upright lions supporting shields. The house is two stories in height, with an attic so boldly developed as to have the real architectural character of a third story. Directly in the center is a roof garden, surmounted with a pergola, supported on the front by elaborately carved gables. The windows are everywhere rectangular in design, with simple frames; those on the ends of the wings are doubled; those elsewhere are single. At each end of each wing, on the entrance front, is



The House Is of Wood Painted White, with Shutters of Indian Red, and Is Abundantly Porched on All Sides



Only the Central Court-like Recess Makes Known the Stable

a doorway, instead of a window, which admits to a side porch contained within the outer lines of the house. Both entrance porch and terraces are inclosed within paneled railings, which are repeated above the porch, where they inclose a terrace at the level of the second floor. The brick base of the building is hidden behind a low-growing hedge, while

further relief is found in an abundance of bay trees and pots and jars of foliage and flowering plants and gaily planted boxes standing on the terrace steps and above the porch. One can not look for trees so close to the shore, and relief from the sun is obtained by awnings attached to the porch.

A great double door, completely glazed and with side



The Lodge Is a Pleasant Two-story Structure



The Spacious Hall Is Paneled in Oak, Above which Is a Plain White Frieze. At Each End Is an Arcade of Elliptical Arches



The Dining-room, Designed in the Dutch Style, Is Oak and Blue



The Billiard Room Is Paneled in Green, with Rough Plastered Walls

windows which extend to the floor, admits to the central hall. This is a spacious apartment opening onto the ocean side of the house. At each end is an arcade formed of low elliptical arches, of which the middle one is much the widest, supported on wood columns. A high wainscot of paneled oak is carried completely around the room; the upper wall is finished with a plain white surface. The ceiling is white and beamed, with large panels. The mantel is under the arcade to the left. It has brick facings within oak columns supporting a frieze, below which is a relief. On the right the entire wall is filled with a series of glazed doors, curtained, separating the hall from the dining-room. There are handsome Oriental rugs on the hardwood floor. The curtains at the windows are red damask, and the furniture, for the most part, is covered with red leather and velvet. The stairs to the upper story rise on the entrance front and are carried across the entrance doorway by the platform. The walls of the upper hall are covered with a diapered pattern.

On the left of the hall is a passage that leads to the library, situated in the furthest wing of the house and on the entrance front. It is charmingly furnished in the Mis-

sion style. The prevailing color is green; the hardwood floor, the rug, the wainscot, the upper walls, the wood of the furniture, the velvet curtains at the windows, the beams and panels of the ceiling, are all in beautifully harmonized shades of green. The chairs are covered with a reddish brown leather; the wainscot supports a shelf, and a handsome copper electric chandelier depends from the center of the ceiling.

Behind this room, but not connected with it, being entered by a separate door from the hall, is the drawing-room. This is a sumptuous apartment in pink and white, very beautifully developed. The walls have a low wainscot of wood, painted white, and picked out with bands of green. Above they are covered with white watered-silk paper, with the same green bands in the corners and margins, thus forming large panel-like divisions. The cornice is white and richly

detailed, and the ceiling is without ornamentation. The wood mantel has facings and hearth of light mottled buff Roman brick. The color of the room is supplied by the rug, the furniture and the curtains. The rug is in two shades of pink. The curtains are of white net with applique borders of pink flowers and green leaves. The furniture is covered



The Library Is a Mission Room in Various Tones of Green

with white velvet decorated with a similar pattern in green and pink; a curtain of the same fabric hangs over the entrance doorway. The grand piano, in one corner, has an exquisite cover of light-colored brocade. There are some fine pieces of old furniture in the room, which is lighted by side lights.

The dining-room is on the opposite side of the hall, and overlooks the ocean; it has windows on three sides, two of which directly face the water. It is beautifully designed in the Dutch style. The color scheme is blue and white. The walls are incased with a high paneling in natural oak, which reaches to the tops of the doors; it carries a shelf on which

secting circles, the whole being crowned with a shelf. There are numerous pictures above, chiefly hunting scenes. The plain cornice corresponds to the wood used below. The ceiling is plain, with three central lights depending from the center over the table. The floor is stained green. The furniture is of oak, covered with green leather. The buff window curtains have bands of green with billiard ornaments on the lambrequins.

On the south side of the house is a portico in two stories; a long flight of steps descends from this to the sunken garden which has been built on this side. It is also reached by steps from the entrance and ocean front, and is a true sunken



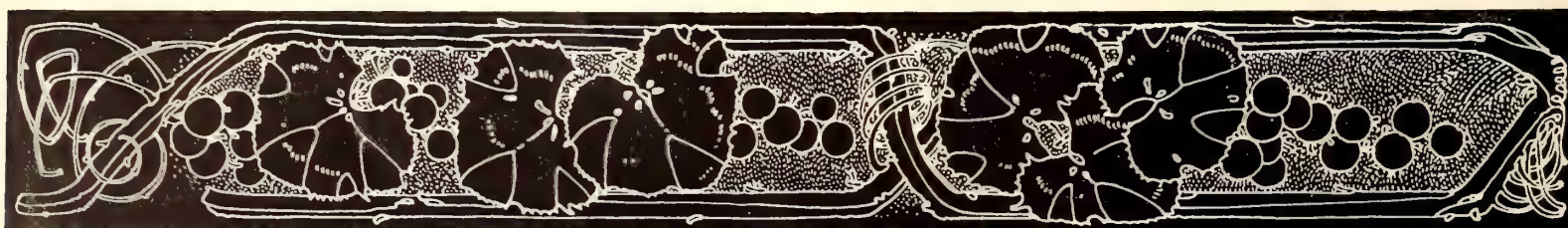
The Drawing-room Is Pink and White: the Furniture Includes Some Fine Old Pieces of Great Variety

are placed a number of blue and white pieces of pottery, a couple of fine Wedgwood plaques, a Della Robbia relief, and other ornaments. All these stand in relief against the frieze of plain pale blue. The ceiling is beamed, with panels of light blue. There is a blue and white rug on the hardwood floor, and the oak furniture has covers of blue leather. The mantel, which supports a paneled overmantel, has facings of dark buff Roman brick. The side of the room which adjoins the hall is, as has been stated, completely filled with glazed doors, over which are blue and white curtains. The curtains at the windows are of blue velvet.

The billiard-room is in the same wing on the front of the house. The walls have a wainscot of green stained oak in upright boards; above are panels of rough plaster with inter-

secting circles, the whole being crowned with a shelf. There are numerous pictures above, chiefly hunting scenes. The plain cornice corresponds to the wood used below. The ceiling is plain, with three central lights depending from the center over the table. The floor is stained green. The furniture is of oak, covered with green leather. The buff window curtains have bands of green with billiard ornaments on the lambrequins.

While the house sets well back in its surrounding land, it is still a considerable distance from the ocean. The ocean front has a long porch, below which is the tennis court. The buildings are completed with the bathing pavilion, which is designed in harmony with the other structures and which is directly in the center on the extreme ocean edge. It is a gracious two-story structure, with an upper belvedere, or observatory, a fine outlook pleasantly arranged.



Raising Grapes for the Suburban Home

By E. P. Powell



WHATEVER other fruit is overlooked in our cozy country homesteads, the grape should never be. It can always find a place, and is not at all particular about ground room. You can set a vine into a rockery or into a crevice among rocks. A fine lot of Concord or of Niagaras can be grown on an elm tree or over a hen house. Every barn should be covered with grape vines, and it is an extra good place for them. They will do no harm on the house, although that is what some people suppose. Fasten wires on your buildings with staples or around nails, and tie the grape vines to these wires as they clamber up. The foliage will not only do no damage, but will preserve the paint. As for creating dampness indoors, that is all humbug. An ivy clinging to the boards of a wooden house may work mischief, but a grape vine fastened to wires is in all ways a benefit.

The grape is one of the oldest fruits mentioned in history. The Bible ranks it with milk and honey as essentials of a perfect home life. That is about the truth of it; for one may live on these three foods, especially when other fruits can be added and garden vegetables. Like the peach and the pear, the grape seems to have originated somewhere in eastern or central Asia, and to have moved westward; while other varieties were native to this continent. It is one of the few things that has never learned how to create a trunk, but always has climbed upon other vegetation. Where the superb grapes of our hothouse culture started is hard to determine; but we can grow these delicious sorts out doors in Florida. They like the warm dry soil, and thrive wonderfully. Scions inserted in the Scuppernong grow ten feet in a season, while cuttings start quickly, as well as seedlings. Before long we shall have originated a new and wonderful race of grapes, possibly hardy as far north as the Ohio River.

Our native grapes are of a half dozen general classifications. The Concord, and grapes of that sort, have come from *Vitis labrusca*, which is common all over New England. Worden and Moore's Early are two of the very best for general culture, and are both brothers of the Concord. The very best grapes for general culture are crosses of our native sorts with European. There are half a hundred of the Rogers hybrids, and a lot more of the Rickets seedlings, only the most of the latter are not hardy north of New York. The grandest work done lately is by Mr. Munson, of Texas. There is a presumption abroad that grapes originating in the Southern States will not prove hardy in the Northern. This is not true, for I find Brilliant, Headlight, Wapanuka, and several more of Mr. Munson's superb productions are all right when growing in the same vineyard with Mr. Moore's Diamond and Mr. Hoag's Niagara.

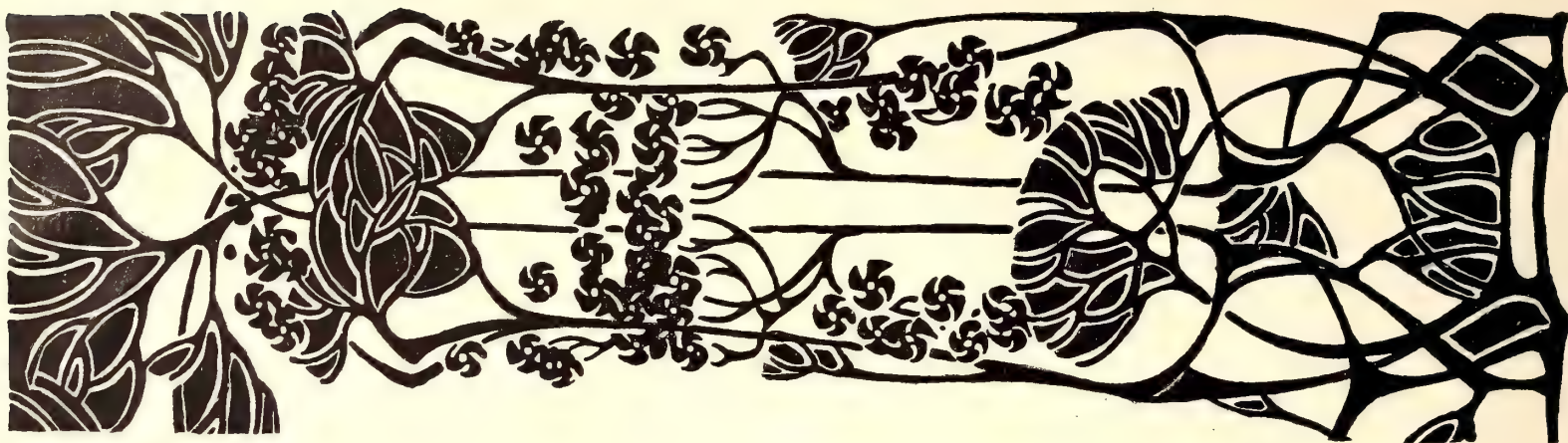
While the suburban home may grow bushels and bushels of grapes all over its buildings, its fences, and its stone heaps, if there be room enough it will still pay to have a small vineyard, because a very small family can use up profitably at least a ton of grapes each year. I would place the vineyard right along side the orchard or the small fruit garden, and run the trellises north and south, if possible. These trellises may profitably be about half as far apart as the apple rows. Then between the trellises you may grow rows of gooseberries or currants. These will not mind a modicum of shade. At all events have the little vineyard so arranged that you can work it with a horse—only be sure that you do not use tools that rip up the grape roots. Good

stout feeding will keep these roots pretty well in line with the trellises, and the spreading roots can stand a little abrasion. I prefer to only cultivate among the currants and gooseberries, and have a heavy mulch for the grape vines. A man can very rapidly turn this mulch over and work out the weeds once or twice in the year.

I grow over a hundred varieties of grapes, but I do not recommend anything of the sort to one who is planting a country home. If you have room for a dozen varieties, take Herbert, Worden, and Moore's Early for black; Agawam, Brighton, Lindley, and Goertner for red; Niagara, Diamond, Hayes for white. Then I find it difficult to omit from my own list Barry and Mills for black; Iona, a most perfect grape, that must be covered winters; Duchess, another delicious white variety, which also needs covering, and Goethe, one of Rogers' hybrids that needs petting. Lady I should place almost at the head of the list, as ideal in quality, only that with me it will not give satisfactory crops. In this list of select varieties we have to bear in mind that some of them will not self-pollenize, that is, they must be planted alternately with other sorts. Brighton, if grown by itself, is absolutely barren; Lindley and Herbert are not much better. Moore's Early is one of the most admirable home grapes that I have yet discovered. It does not bear heavily when young, but is as hardy as a fence post, and gives splendid crops later. Hayes is another ideal home grape. Not much known, it is delicious in quality, bears very heavily, in color is white, and is not very seedy. Massasoit should go in the list only that it is very subject to black rot.

If you must limit your planting to about four or five varieties, take Hayes for early, followed by Brighton, followed by Niagara and Worden, while Herbert and Goertner will fill up later autumn. If you must come still closer to a single variety, take Moore, Niagara, Worden, and Herbert. You will notice that I have left out Mr. Munson's new cross-breeds. I recommend, however, that every one write for his catalogue, and test a few of his hardier sorts. I am myself particularly fond of Duchess, because it is so near seedless, but it is very tender, and will prove unsatisfactory. A first rate table grape is Eumelan; and Pocklington, a seedling of the Concord, is one of the hardiest, most vigorous, and productive grapes in the whole list, and should be planted by everybody who lives south of the New York line. Campbell's Early is a fine thing, but not in my judgment equal to Moore's Early. Delaware is a frail grower, and not suitable for people who are liable in any way to neglect their vines. I have just planted McKinley, and it bids fair to be one of the best.

Grapes will do fairly well under neglect, but it is far better to trim them back to two or three eyes, each fall, and lay them down for the winter. The best trellis for a common garden is a row of posts, about twenty-five or thirty feet apart, to which you hitch wires, three in number, by staples. Tie the vines to these wires in as home-like a way as you please. If you are willing to pay some special attention to your grape crop, I advise you to learn some method of systematic trimming and training. You can find out more about this in my book on "The Orchard and Fruit Garden," or in the "Cyclopedia of Horticulture." Mr. Munson's method is original with him, and exceedingly good. You can learn the gist of it from his catalogue, issued from Dennison, Texas. At any rate plant grapes, even when you find a spot on a steep hillside or among rocks, where nothing else will grow.



The Culture of the White Lilac

By W. G. Fitz-Gerald

A MIRACLE almost as wonderful as that of Aaron's rod, which "brought forth buds and bloomed blossoms," is wrought every year in fair France, the home of hosts of dainty things. Everyone will remember the vast open-air flower farms of Provence, especially at Grasse, near Cannes. Here millions of pounds of roses, violets and lilies are converted into essential oils for the world's perfume.

But France also does an immense traffic in costly cut blooms, which make beautiful all the homes of northern Europe when winter's hand has laid the garden flowers aside. In fact, the day when berry and bough were the principal

home decorations in winter seems to be gone forever. Even the exquisite white lilac is forced to perfection in less than three weeks by a marvel of scientific gardening, and that from dried rods that look like worthless brushwood, fit only for the fire. Many people in London and Paris think that these masses of exquisite blossoms come from the sunny South, where they have blown and thriven in a warm and generous soil kissed by the sun of genial Provence.

But nothing could be further from the fact. It is the neighborhood of Paris itself, with a winter climate little better than London's own, that supplies most of the white lilac used in Europe. And it is beneath the dull cold skies that threaten Vitry-sur-Seine and Fontenay-les-Roses that the



Arranging the Blooms for Shipment to the Cities



Planting the Twigs in the Forcing House, which Is Kept at an Even Temperature of Ninety-five Degrees



Selecting Lilac Rods in the Store House for Planting in the Forcing-room



Gathering the Forced Lilac in the Hothouse

most beautiful sprays of white lilac are grown. This part of the Seine Valley, by the way, is singularly little known to Paris visitors. Artists know and love it though, for in its heart is the quaint resort known as "Robinson," where there is an entire village of restaurants and aerial bowers perched high among the giant limbs of vast elms and chestnuts.

Visitors to Vitry will notice that a huge area of the Seine Valley hereabouts is given up to the open-air cultivation of lilac. Not many people are aware, by the way, that this beautiful shrub was originally brought to us from Persia, a land famous for its flowers for many ages. The lilac has become quite acclimatized both in America and in Europe; but it will surprise many to learn that the white winter variety is not grown out of doors at all, but that the lovely fragile blossoms are produced in winter by forcing methods, and that from a lilac whose natural hue is mauve and purple. The blossom becomes white by reason of the treatment the plant receives.

All through the hot summer months the gardeners at Vitry, Fontenay-les-Roses and round about Sceaux are busy examining the lilac trees and pulling up from the family group such rods as have attained an age of from five to nine years, and are therefore considered the most promising for forcing. And on one side of the vast lilac groves are big sheds which soon come to be packed from floor to ceiling with what look like bundles of dried twigs, only fit for the furnace.

But close investigation will show that the root of each little rod is deftly wrapped in a scrap of Mother Earth's brown apron, and so the insignificant sticks are put to sleep until the winter follows the gusty autumn. Then the magical touch awakens them into a miracle of life.

The long slender rods are now carried into the forcing houses, where the wonder is to take place. Far-stretching vistas of glass are these, divided on each side into twenty or thirty cubicles. Here the dry sticks are planted close together in rows in rich soil not more than eighteen inches deep. Is it possible, one asks, that within three weeks the "miracle of Aaron's rod" will have been wrought on these barren twigs? Doors and windows are forthwith

hermetically closed and the heating process then begins. Each cubicle is maintained at an even temperature of ninety-five degrees Fahrenheit; and so persuasive is this treatment, in addition to constant and most careful watering, that in only a few days the smooth rod is literally bursting into bud. Extreme precociousness is not encouraged, however, and only a few privileged buds at the ends of the twigs are allowed to complete their destiny.

All the hopes and dreams of the luxuriant shrub, which during its six or seven years of life have been so often set high on the happy moment of flowering, are now wrapped up in these few buds, which the inexorable gardeners decide to spare. And as though fearful of another check, another cruel failure, the sapling sends its nutriment upward with such force in the supreme effort at flowering that one can almost see the rod breaking into leaf and blossom before one's very eyes.

Surely here is a bud like a tiny bead, where but a moment ago was nothing but the bark of the dried twig! And there is a tiny leaflet peeping forth as though by magic! Almost as we watch these evidences of life unfold, and each snowflake calls upon her sisters until a tall and showy pyramid of fragrant blossom stands proudly erect before us.

Perhaps now, in the joy of her perfection, the lilac will forgive the stern repression of her tender buds. That she will forget, too, how she was condemned to grow in total darkness until the first appearance of her flower petals, so as to ensure an exquisite snowy blossom. Light is given at length only to prevent the flowers from taking on a yellowish waxen tinge, and also that they may gather health and strength.

Surely, you will say, these marvelous rods have wrought a miracle, and done well for their masters! Alas, they get little gratitude in return. These lilac plants are doomed to the shortest of careers. No sooner have the lovely and delicate sprays been gathered than the hundreds of rods that have grown so vigorously in each cubicle are ruthlessly dragged up, and their brief season of usefulness over, they are cast into the furnace to supply heat for their successors.



Trimming and Cutting off Useless Buds



Results of Ten Days of Forcing and Pruning

This strangely forced white lilac, then, blossoms only to die. Each cubicle in the forcing house furnishes nearly a thousand superb sprays of white lilac, only four or five buds being permitted on each rod. The blossoms are cut with the greatest care late in the evening, and then placed without a moment's delay in a very cool cellar, in specially made troughs filled with water. Here they are left until the very last moment, when deft-fingered girls collect the sprays into dozens and stick them in big cushions of straw, which with the base of the stems are covered with wall-flower foliage.

And then, with the swiftness so necessary in this trade, the "miraculous" blooms are put on board express trains and steamers for Paris, London, Berlin, Vienna, and even far-off St. Petersburg and Moscow. Little Vitry alone will bring to perfection 125,000 plants during the season, and hundreds of acres are required for the industry and also for the growing of the wall-flower foliage that goes with the sprays. Of these latter three or four thousand may be gathered in a single day, and at Christmas time as much as five dollars will be paid for a single drooping snow-white spear.

Nor does the demand slacken with the spring. True, the natural lilac, with its more robust coloring, then begins to flaunt its charms; but both florists and public know that the forced variety can be counted upon to the hour, and fears neither storm nor frost. A limited quantity of both mauve and purple lilac is also produced from these "magic rods"; but the fastidious in the great European capitals prefer the snow-white blossom, especially for wedding decorations.

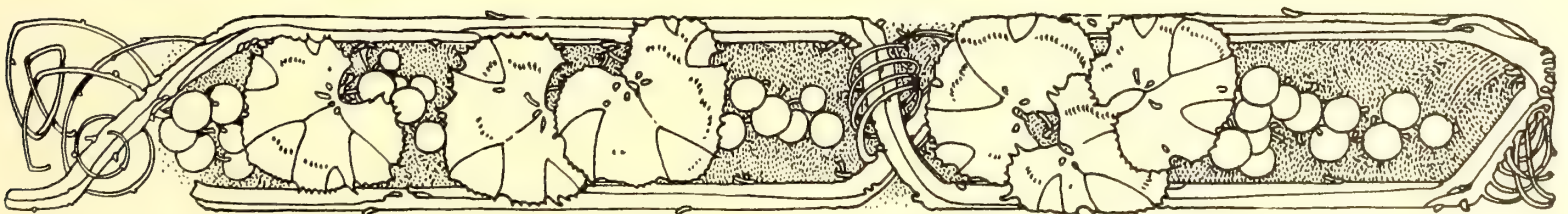
Chrysanthemum Umbrellas



HORTICULTURIST of the Pyrenees has invented a curiously formed thatched protection or umbrella which is supposed to protect chrysanthemums from frost. Chantrier, the horticulturist in question, claims that he obtains particularly large and handsome flowers by reason of these covers. It may be that similar devices may prove of service to the chrysanthemum growers of this country. At all events, his scheme is so cheap that it seems well worth trying.



Growing Chrysanthemums Under Umbrellas in the Pyrenees



An Architect's Summer Home

The House of Austin W. Lord, Esq., Water Witch, New Jersey

By Annie Tolebate



THE summer home of Mr. Lord, at Water Witch, N. J., is beautifully situated in a great rugged park which is embraced in Water Witch, and while its facade faces a smooth plateau containing a well laid out tennis court, the rear or living side of the house rests on a side of a receding hill, thereby permitting an unobstructed view of the lower New York Bay.

The house is built in a simple manner, and hence is so at-

tractive and delightful; for there has been no attempt to ornament it. It lies close to the ground, resting on a low brick underpinning. The superstructure is covered with split shingles laid with double butts and ten inches to the weather. This shingle work is finished natural, while the

blinds are painted white. The roof, covered with shingles, is also left to weather finish. The interior of the house is unique and has many structural features. The plan shows an elongated type, with the entrance at the front and the living-porch at the rear, access to which is obtained by French windows from the living and dining-rooms.

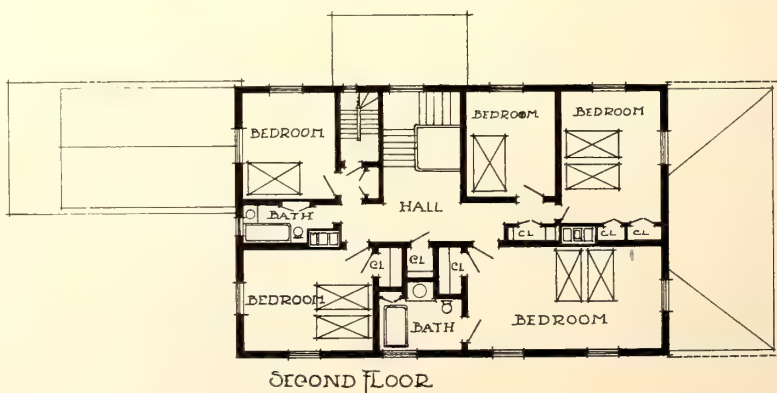
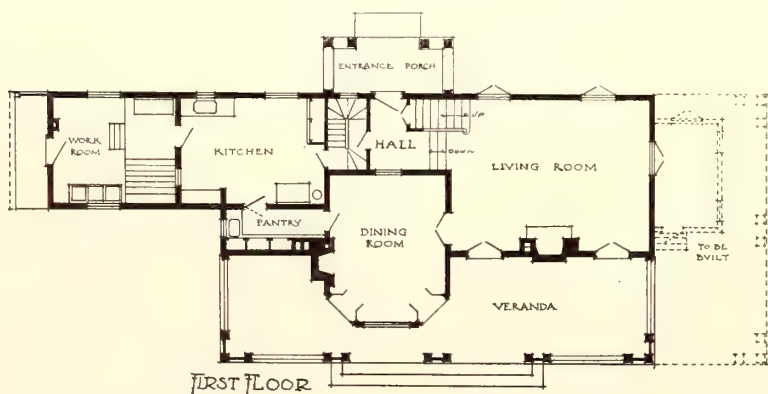
The entrance is into a vestibule, from which a short flight of steps leads to the living-room. The stairs to the second floor rise out of the latter room, and have a white painted



The House Is Covered with Split Shingles

balustrade with a mahogany rail. The trim of the hall and living-room is treated with ivory-white paint, while the walls are tinted an old rose tone. The open fireplace has Welsh tile facings and hearth, and a mantel of Colonial style. The room is charmingly furnished, for it

tractive and delightful; for there has been no attempt to ornament it. It lies close to the ground, resting on a low brick underpinning. The superstructure is covered with split shingles laid with double butts and ten inches to the weather. This shingle work is finished natural, while the



contains some very good pieces of antique furniture of the Colonial period.

The dining-room has a white painted trim and green tinted walls. The fireplace is built of brick and the mantel is of Colonial style. French windows open onto the piazza, one corner of which is used in warm weather for a dining-room.

The butler's pantry is fitted with drawers, dressers and butler's sink. The kitchen and laundry are trimmed with yellow pine, finished natural, and each is fitted up complete.

There are five bedrooms and two bathrooms on the second floor, the latter being furnished with porcelain fixtures and exposed nickelplated plumbing. The trim of the entire floor is painted white, and the walls are tinted in one tone for each room.

The servants' rooms and storage space is provided on the third floor. A cemented cellar under the entire house contains a furnace, fuel room and storage space. Messrs. Lord & Hewlett, of New York City, were the architects of this pleasing house.



A Small Porch Suffices for the Entrance

This fact in itself at once discloses a special interest in this house, for the dwelling built by an architect for his personal use invariably has a special attractiveness to the observer of houses. And why not? That houses are imperfect and seldom what they ought to be is a circumstance known to all women and even to a few men. It is needless to inquire into the reason for this; it simply remains as a fact patent, practically, to every one.

But when the architect starts in to build his own house the very minimum of error and inconvenience is to be looked for. If ever a person who builds a house knows houses it is the architect, and it is quite natural to conclude that there will be little to criticize in the house he has built for himself.

This is very obviously true of the charming house

Mr. Lord has built for his own use at Water Witch. The employment of simplicity as the keynote of the design is masterly, for nothing could be simpler, nothing more restrained, nothing quieter. And the result is satisfying.

How to Arrange Window Curtains

By Ada Walker Camehl



WINDOW should be treated with careful thought and consideration. When you have arranged a shade so as to regulate the light and to insure privacy, and have draped a pair of white curtains over a pole in a more or less graceful fashion, do not content yourself with the idea that all decorative possibilities of window furnishing have been exhausted. Windows present one of the most difficult problems to the home-builder—as well as one of the most interesting; for the power of window treatment for adding to or detracting from the charm of a room is manifold.

In the first place the furnisher must decide which of two plans she wishes to follow: whether to treat the window as a wall decoration, so arranged as to shut out prying eyes or a disagreeable outlook, and still furnish light for the room;

or whether to bring into the room a beautiful landscape or tree or bit of lawn, and to let the window serve as a frame for the outdoor picture.

The first plan admits of two treatments: first, that in which the problem is to secure privacy in a room which looks directly upon the walls or windows of a nearby house; second, that in which the outlook is from a high apartment upon ugly chimneys and roofs. If your window opens upon a bare, uninteresting wall, hang dainty net of muslin curtains next to the panes so that they fall in graceful fulness. These may be edged with lace or a ruffle, but simple, plain net is always in good taste. To my mind nothing is prettier for inside curtains than ruffled point d'esprit. Hang these upon a small brass rod or upon picture wire, if economy is to be considered, and leave a narrow heading of the curtains above the rod. These curtains may hang straight, or they may be



The Stairs in Mr. Lord's House Rise from the Living-room

draped back with washable cords, so as to present a pleasing appearance from the street. Over these suspend, from a small brass rod, thin silk or silkoline curtains of a color which harmonizes with the colors in the room—yellow, pale green, or pink silk makes effective screens and gives a pleasant light. Yellow gives the effect of sunlight, and should be used in a north room. These silk curtains may be drawn apart when more light is required. From the large rod drape curtains of heavier stuff—cretonnes, chintzes, or denims—any wash material, if for a bedroom; heavy silks, brocades, or any rich hangings, if for living-room, reception-room, or library. Hang these at the outer edges of the inner curtains, either in straight folds or draped over curtain knobs of antique design. The brass or opalescent knobs of our ancestors, when obtainable, are serviceable and beautiful.

If the problem is to treat a window of an upper apartment where the securing of privacy is not so essential as the screening from view of neighboring roofs and chimneys, a pretty way is to cross the curtains next to the panes and loop them high on either side, so as to form a straight line of drapery across the upper part of the window. Then arrange pots of growing plants and ivies across the sill and train them to within twelve or more inches of the upper curtain. The result from the interior of

the room will be a charming view of sky framed by the curtain and the hedge of growing green. Plants are always beautiful in windows. Leigh Hunt expressed the opinion of many when he said: "Why does not every one who can afford it have a geranium in the window, or some other flower?"

If the plan of framing a piece of landscape is to be adopted, omit the curtains next to the panes and hang straight white or cream colored curtains on the rod just inside of the heavier draperies, and draw these apart to admit the outer view. Curtains cut Morris fashion may also be used in this way. This means that two pieces of curtain are hung from either side with a ruffle running along the top, thus making a frame for the view outside. Too much trimming in the way of ruffles and lace, however,

should be avoided. Heavy draperies are not always used, but in the average house they add greatly, not only by concealing the commonplace woodwork and the straight outer edge of the white curtains, but also by repeating the color scheme of the room; for care should always be taken to choose material for them of a color which harmonizes with the woodwork and with the wall covering.

The heavy wooden cornices which were in vogue in the early eighties are not considered in good taste to-day.



Quiet Simplicity Characterizes the Interior

Street Entrances

By Helen Lukens Gaut

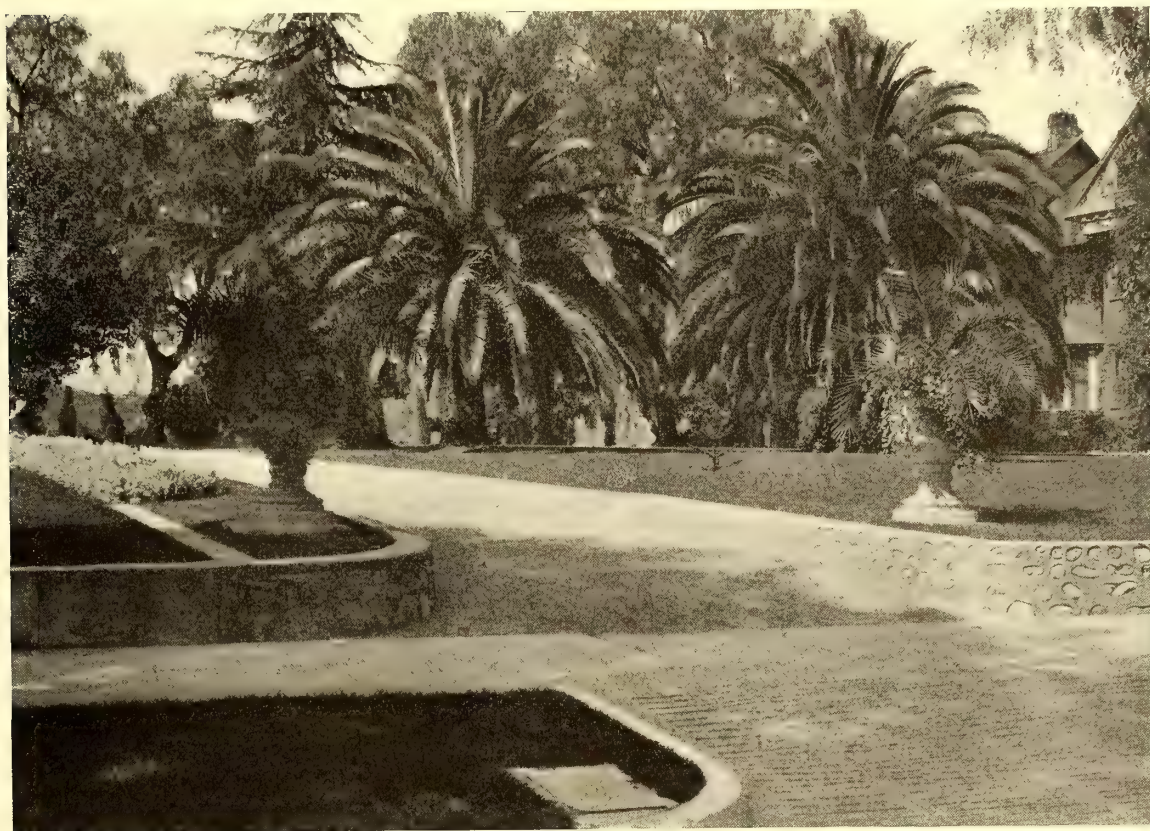


SEATED at a table spread with fine linen, silver and cut glass your anticipations of a good dinner are greater than if seated at a board covered with oilcloth and littered with tinware. In the same fashion your expectations of wonderful things to come are lashed into high speed when your carriage whirls between two splendid monuments that mark the approach to the dwelling for which you are bound; whereas, on the other hand, if you must get out in the dusty road to let down the bars of an old board fence, ruining the shine

monuments of stone on either side of his street entrance. The combination is as far-fetched as that of a diamond tierra with a calico gown. You feel as if someone is trying to deceive you. There is something hypocritical in the arrangement.

The cottage home with approach marked by simple quaint affairs of timberwork, an arch perhaps, or a roofed entrance gate overhung with trailing vines, is an honest bit of civilization. It means just what it indicates, just coziness and comfort. These roofed entrance gates are especially attractive, and are of inexpensive and easy construction. They appear

best when made of rustic or unplanned lumber. A rustic gate under the narrow roof gives picturesqueness, but where there is much going in and out a gate is a nuisance to open and shut. The roofed entranceway shown in one of the illustrations is a pleasing style, and appropriate for marking a driveway leading to a cottage or bungalow. If the lot is narrow, this driveway, because of the space required for the dwelling, is necessarily relegated to one side of the lot. A wall of lattice, covered with climbing geraniums, honeysuckles or roses, to hedge the garden across the front and connect with the roofed entrance gate, gives a happy effect, and if the wall is high enough, affords the owner the privacy of his garden, where he may sit in his shirt sleeves and peace, smoke his pipe and read his



A Simple Wall Can Effectively Retain Lawns and Flower Beds

of your boots by doing so, your hopes of hospitality and refinement beyond the boundary are weighted with suspicion. Yet it is truth that the oilcloth covered table with its tin dishes is invariably loaded with good, wholesome, hearty victuals, the kind that give man the comfortable, pleasant assurance of a "square meal," a pleasurable sensation he is usually stranger to when nibbling this and that delicacy while partaking of a "cut-glass" dinner. Then, too, beyond the bars of the old board fence one usually finds the apple orchard with its blushing fruit, the arbor with restful shade, and a host with the soul of a man, whose hand grasps that of his visitor with honest sincerity. After all, it is simplicity, whether in the serving of a potato or the serving of hospitality, that makes the best impression, that paints the most beautiful and lasting pictures in our gallery of memories. There is, in simplicity, the eloquence of God, while the grandeur of man's making seems always shouting and blowing self-congratulatory trumpets.

Sometimes the builder of a simple home on a fifty-foot city lot, lacking a sense of harmony, and wishing to punctuate his place of residence with aristocratic emphasis, erects huge

newspaper, without being the eye-target for passers-by. Neither can he see the tireless fish wagons, sprinkling carts and ambulances as they hurry by in procession. By closing his ears to the noises of traffic, he can, without over-exertion of the imagination, believe himself in the glad country, for behind his garden wall flowers bloom riotously, and birds flock down from the sun-scorched church spires to sing their chorals, finding inspiration for their music in God's hymnals, the blossoms and green leaves.

A small cottage located on a city lot can be appropriately and comfortably walled from the street by a high, neatly trimmed cypress hedge, the entrance-way being accentuated by square evergreen monuments, or any other shape desired, for that matter, for by frequent use of the pruning shears and a little ingenuity, the cypress may be induced to take on any form from pillars and fruit baskets to royal arches. A high cypress hedge, however, terminating at the entrance-way in square dignified pillars, is best suited to the country place consisting of several acres. The cypress is a brisk grower, and the only objection one could have to it is its almost constant need of trimming. If not properly attended



Japanese Stone Lanterns Give a Note of Real Interest



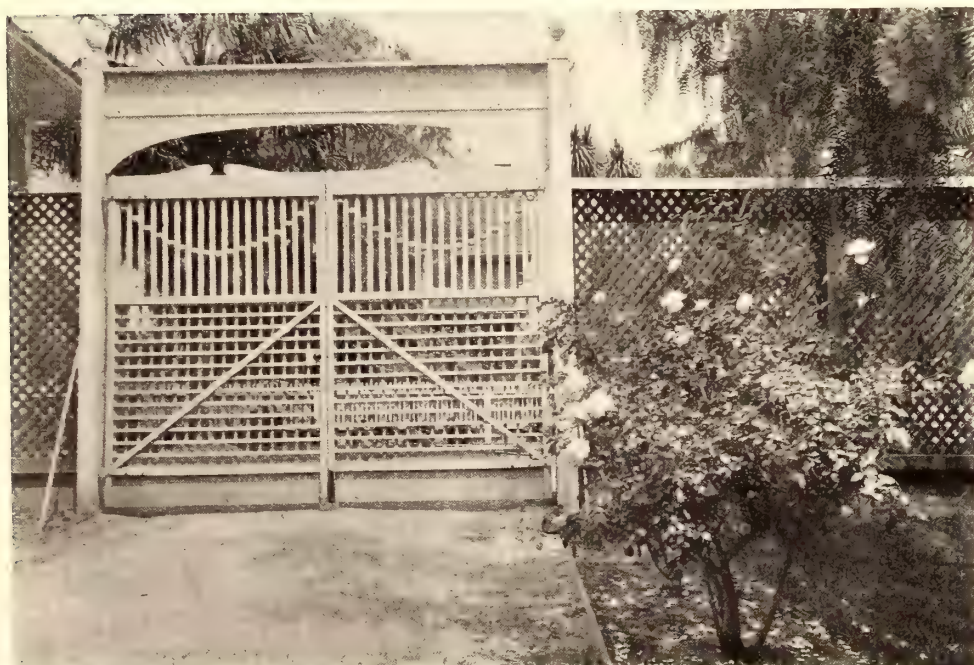
The Rubble Stone Pier Is a Popular Favorite



The Floral Pathway Is Sometimes the Best of All



Dignified Piers for Hedge Terminals



A Wall of Lattice Gives a Happy Effect



A Simple Pier with Lantern and Ornaments



Evergreen Monument to Mark the Entrance



The Simplest Gate May Have Its Merits



Brick Pier with Japanese Lantern



A Tile-roofed Entrance Supported by Field Stone Piers



The Charm of Unaided Nature Is Imperishable



A Trellised Entrance Overhung with Vines



A Due Proportion Between Piers and Gates Is Essential

to it soon looks as unkempt as the man who forgets to shave. Those who can afford to keep a gardener get abundant satisfaction from one of these rich green hedges, but the man of lesser circumstances, unless he finds recreation in puttering around his garden after business hours, finds it a kind of "bugbear."

Fences and gates of timberwork can be made attractive with but little expense and labor. Wooden posts, six or eight inches square, with either square or fancy caps, form the simple foundation of a gate, either single or double—for path or carriage. This wooden gate can be made in any design, according to the notions of the builder. Two especially attractive designs are shown in the illustrations. Sometimes rough lumber is used in construction, sometimes that which has been planed and put through a lathe. If made of rough material, wood-stain is used for a finish; if of smooth, regulation house paint.

Brick pillars are best suited for marking the street entrances to pretentious country places, to public buildings or parks. The one shown in the illustration reflects the Japanese motif which predominates in the residence on the grounds. The huge black Japanese lantern that caps the masonry is most effective, giving a brisk touch of both character and style. In building these brick pillars the walls are first made with single thickness of brick, after which the interior is filled with cement—a poor quality will answer for this quite as well as the

best. This filling gives strength and durability.

Another kind of masonry that is popular for fence posts and entrance monuments is that known as "rubble-stone." It is made up of stones of all kinds and sizes, and there is a freedom and carelessness about it that is exceptionally pleasing. A most attractive example of this style of work is shown in one of the accompanying illustrations. On the street line is a large monument showing immense irregular boulders at the wide base and smaller ones at the top. From this a quaint tiled roof extends across the walk, being supported on the opposite side by a smaller rubble-stone monument. An iron gate of simple design completes the happy ensemble.

In Southern California cobblestones are used extensively for walls, as supports for heavy fence rails, and for street pillars. The effects obtained with them are often striking. They are easily obtained from the dry beds of arroyos and washes, and are less expensive than any other kind of rock. On the ground they are worth from twenty-five to fifty cents a load, while teamsters charge from two dollars and a half to three dollars for hauling.

The street entrance leading to a plastered "Mission" house, to be in harmony with the scheme, should be accented by plastered monuments with caps of red tile. The framework for these monuments consists of two-by-four scantlings sheathed with one-inch boards with metal lath and plaster.



Elaborate Designs in Wrought Iron Are often Effective



Carved Teakwood Base

Japanese Bronze and Teakwood
Incense Burner

Teakwood and Jade

The Romance of Old Teakwood

By Mary H. Northend

With Photographs by the Author



HERE is an elusive charm about old teakwood furniture that endears it to the heart of the collectors, causing it to share in the popularity of the Sheraton sofas and Chippendale chairs which the present craze for antiques has made valuable. To this charm teakwood owes much of its value, although rarity, age, exquisite workmanship and beauty of material all combine to render the genuine pieces of old teakwood furniture almost priceless in value. Practically speaking, teakwood has, with the quaint old pewter pots and Wedgwood china, become a thing of the past, for while there is still imported furniture presumably made of that wood, so many are the deceits practised in the modern importations, and so poor is the workmanship when compared with that of a century ago, that its value is scarcely one-fourth of the original, and may be said to be constantly deteriorating. To find the best specimens one must look in the old Colonial mansions along the coast of New England, which were once the homes of merchant princes, whose delight it was to fill their homes with rare and curious articles from abroad.

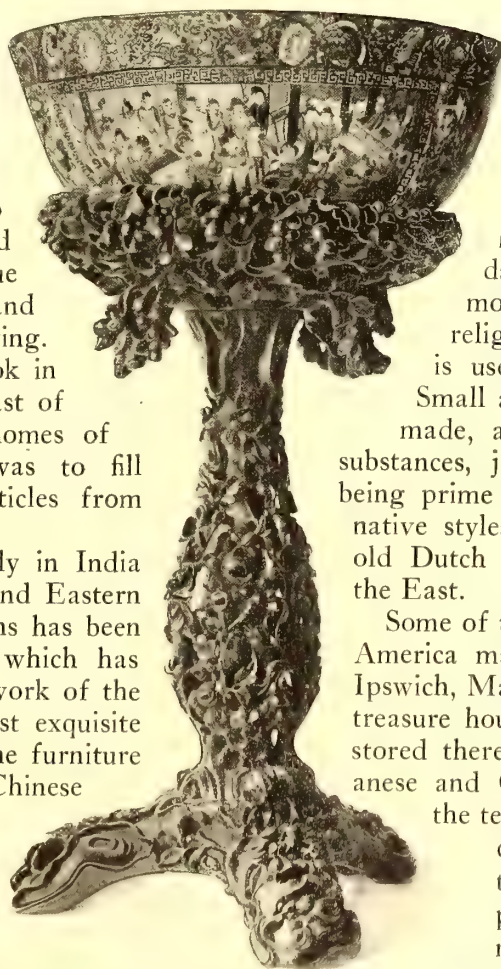
Although the raw material grows only in India and a few other countries in Southern and Eastern Asia, little of the work of Indian artisans has been imported, nearly all of the furniture which has found its way to our country being the work of the Chinese and Japanese, to whom the most exquisite of wood carvings may be attributed. The furniture used in the houses of even the wealthy Chinese was plain to excess, although it was by no means lacking in a certain artistic merit; but the importations have always been decorated with intricate patterns the carving of which meant not days but weeks, months in some cases, even years, of patient labor for the comple-

tion of the work. When the merchant princes of New England imported the richly carved chairs and ornaments of teakwood the domestic question had not yet become a problem, and both mistress and maid delighted to dust the quaint carvings, tedious as was the task.

Chairs and tables of teakwood are among the more common pieces, nearly all of these being really wonderful specimens of artistic skill, covered as they are with strange and beautiful devices.

It is not difficult to distinguish the carving of one nation from another, though there are three represented in the work which has come to our country, namely, the Japanese, the Chinese and the Indian. Of these three, the Indian is most crude, the carvings being fewer and clumsily executed. It is most difficult for the artisans to obtain perfect specimens of teakwood for their work, as they dare not use any wood which is even remotely associated with any of the numerous religious superstitions of their race, and teak is used in the construction of their temples. Small articles, curious and quaint, are frequently made, and the combinations of teak and other substances, jade, crystal, rock salt and tortoise shell being prime favorites, are extremely beautiful. The native styles of wood-carving are derived from the old Dutch models, brought by the early traders to the East.

Some of the oldest and rarest pieces of teakwood in America may be found in the Heard collection at Ipswich, Mass. The old family mansion is a veritable treasure house, but among the rare and costly things stored there, none are more beautiful than the Japanese and Chinese articles, numbering among them the teakwood. Nor is this house alone in its fine collection, for it is but one of many along the coast which boast behind their stately portals rare pieces the equal of which can not now be found among later day productions. In Salem, Mass., probably the best collection of teakwood belongs to

Teakwood Stand and Chinese Porcelain
Punch Bowl

Mrs. James P. Cook, many of whose rarest pieces are now photographed for the first time. The gem of the collection is without doubt a table which measures over four feet across the top. The carvings include a floral design with feet of open-mouthed dragons; the top is of Chinese marble.

Dragon forms are popular with Chinese workmen, and find a place in many of their finest pieces. There are few pieces of teakwood that are carved alike, owing to individual interpretations of the common pattern which each workman of a shop is supposed to follow. Formerly each family had its own pattern, and an entire village would be devoted to the work, each family working upon a piece until it was

together with a table whose decorations are of dragon forms, are splendid examples of the reptile's use, while a screen has solid supports carved in the likeness of canines of rather belligerent appearance. Half way up the standards are surmounted by smaller dogs, while the screen of silk, richly embroidered, is framed in a filagree design.

Occasionally the searcher after rare teakwood comes upon a bit of Spanish or Portuguese furniture, which is especially valuable, as the teak long ago ceased to be exported to Spain and Portugal and the manufacture of these articles ceased. The European designs of these Spanish artisans are less intricate than the Oriental patterns, and for that reason are more popular. For example, a chair in the possession of a



Teakwood Furniture in the Bowling Alley of Mr. E. C. Swift, Magnolia, Massachusetts

completed for the market. Now the artisans are banded together, some twenty or more belonging to one shop, and the work is carried on much the same as in any shop, the workmen following the common pattern, which is seldom changed, owing to the jealousies existing between the various shops. Flowers are found in profusion in all the carvings of the Oriental countries, the sacred lotus being most common among the Chinese carvings, while the cherry blossom not infrequently forms part of Japanese work. The sacred dog of Confucius is also found in the work of his followers.

Splendid illustrations of the favorite carvings of both the Chinese and the Japanese are not wanting, and a table whose standard is formed by the coils of two immense serpents, to which little forms, half beast and half human, are clinging,

Boston collector, built after the style of Charles II, and carved by a Spanish workman, is valued at four hundred dollars, while another chair, fully as old and four times as large, was valued by the same person at only one hundred dollars, because the carvings of the latter were not so well designed and but indifferently executed. Indeed, the Spanish designs excel all others for beauty and workmanship, which consequently places them highest in intrinsic worth. The specimens of Spanish work are, however, rare, and but few are now to be found in America.

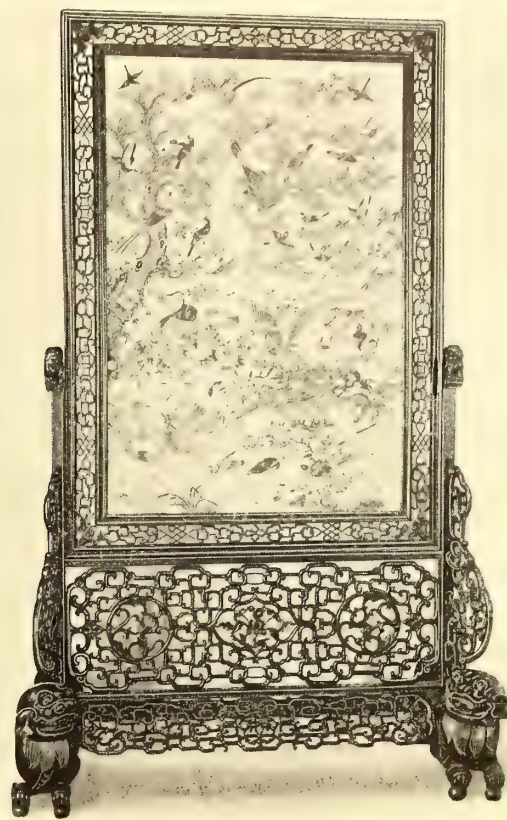
It is in the smaller articles of teakwood that the most exquisite work is wrought. The dark wood lends itself to other substances, making them more beautiful by contrast, and the wonderful fancies in which it is wrought add their quota to the effect of the whole. Nearly all of the teakwood



Bell in Teakwood Frame



Hunting Horn of Carved Teakwood



Silk Screen with Teakwood Stand Supported by Dogs

in such articles is stained black, giving it a dull effect like ebony, although in a few rare pieces the natural brown of the wood may be found, the colors varying from heart wood to sap wood.

One of the more unique smaller articles is a card receiver of soapstone and teakwood. The wood is wrought in a lotus design, while dragons, birds and leaves are elaborately carved upon the soapstone. A candlestick, which would doubtless be admired by the connoisseur, consists of three bronze dolphins supporting a single bronze lotus flower, resting on a teakwood stand carved in the form of lotus leaves. A small curio suggestive of the Orient is a bronze incense burner. The metal is chased and the teakwood standard represents elaborately carved pomegranates.

From China comes a very graceful piece of carving in the form of a standard supporting a punch bowl of genuine Canton china. The decorations of the standard are most appropriate and suggest the fruit sacred to Bacchus. A

similar standard, less elaborate in design, has tiny animals lurking amid the vines, which resemble the timid creatures of wood and field. The wealth of figures which are combined in the simplest piece of carving is really a revelation to the present-day artist who confines his work to the scrolls and varieties of complicated lines for the most part.

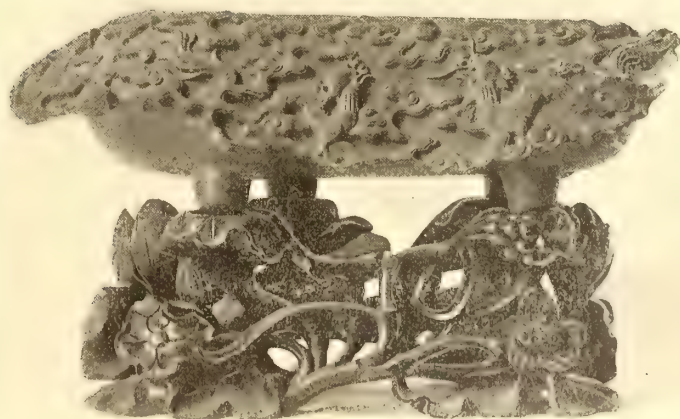
The age of teakwood is not difficult to determine if one is fairly familiar with the wood. The carvings constitute the hall-marks, as well as determine the value of the article, and by the comparison of the work upon various pieces, not only can the age be approximately



Teakwood Support for Crystal Globe



Teakwood Base for Porcelain Bowl



Soapstone Card Receiver on Teakwood Stand, Lotus Design

fixed, but the nationality of the workers as well. Upon these the collector may be said to rely for his information, and they are quite infallible aids. Strangely enough, though, the

stances. Teak is found only in the forests of Eastern and Southern Asia, nearly the entire produce being under the control of Great Britain, and when some years ago it was



Tortoise Shell Screen on Teakwood Base



Old Chinese Porcelain Bowl on Teakwood Stand

patterns themselves are far less useful than the workmanship, for from hand to hand the designs have been spread until generally toned down, added to here and there, and taken from as the carver willed, there was little to show what the original had been save a general semblance in all the work which can but be noticed.

The value placed upon teakwood is very high, though it is true that modern furniture is far less valued than the antique. An owner of a yacht recently paid one thousand dollars for teakwood flooring for his yacht, which is by no means an exorbitant price under the circum-

stances. Teak is found only in the forests of Eastern and Southern Asia, nearly the entire produce being under the control of Great Britain, and when some years ago it was found that the trees were rapidly becoming exterminated by the tremendous exportations and the carelessness of the men whose business it was to fit the wood for market, the government promptly took the matter into consideration. Teakwood was much used in the construction of war vessels, and its loss meant a serious one to the government, which could find nothing that would so well fill its place. Its exportation was immediately forbidden to a certain degree, so that the supply was practically in the hands of the government.

Teakwood is very hard, and is sometimes wrongly called ironwood.



Teakwood and Tortoise Shell



Bronze Incense Burner on Teakwood Pedestal



Jade Plaque on Teakwood Base



Rock Salt Embedded in Teakwood



The House Is Built of Hard Burned, Sand-finished Red Brick and Stucco of Natural Gray

Residence of Maxwell Wyeth, Esq., at Rosemont, Pennsylvania

By Francis Durando Nichols

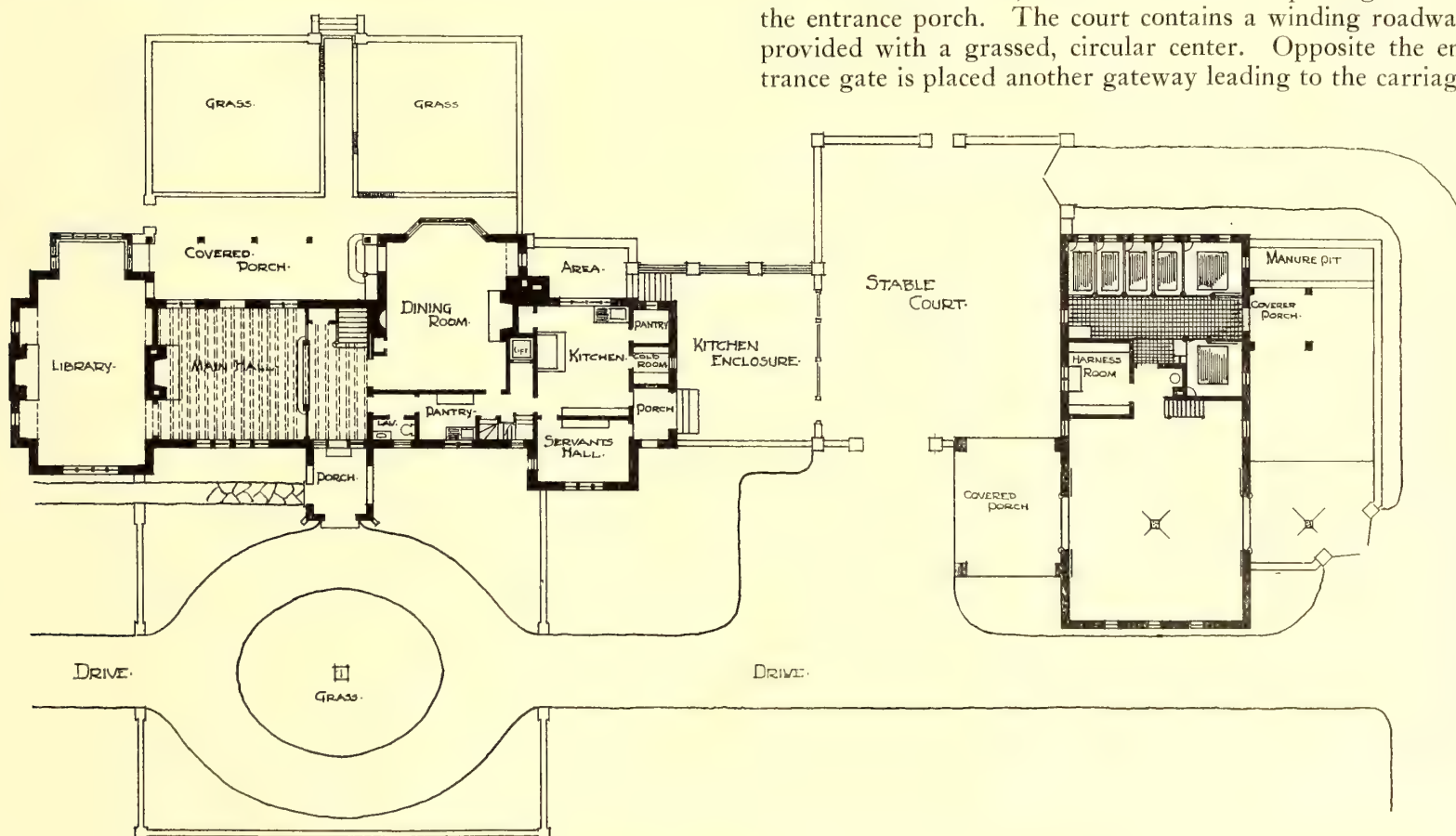


HE residence of Maxwell Wyeth, Esq., at Rosemont, Pa., designed by Mr. Wilson Eyre, presents a typical American house, arranged with modified forms. In the characteristic American house of to-day the keen observer can easily discern the effect of the two different tendencies—the one which induces the intelligent architect to adhere to certain authentic types of domestic design, and the one which induces him to modify the type in order to meet the local or personal requirements for the purpose of producing a

novel and individual effect. A house may adhere so closely to an authentic type that it loses all individual character; or the architect may sacrifice everything in his desire to be original, and may thereby lose the deeper charm which people of taste derive from well designed architectural forms.

In the designing of Mr. Wyeth's house, Mr. Eyre has demonstrated his personal characteristic by combining the two tendencies with the original effects which dominate all of his work, and has produced a most harmonious whole.

The house is approached by a curved driveway passing into an inclosed court, where a circular sweep brings one to the entrance porch. The court contains a winding roadway provided with a grassed, circular center. Opposite the entrance gate is placed another gateway leading to the carriage

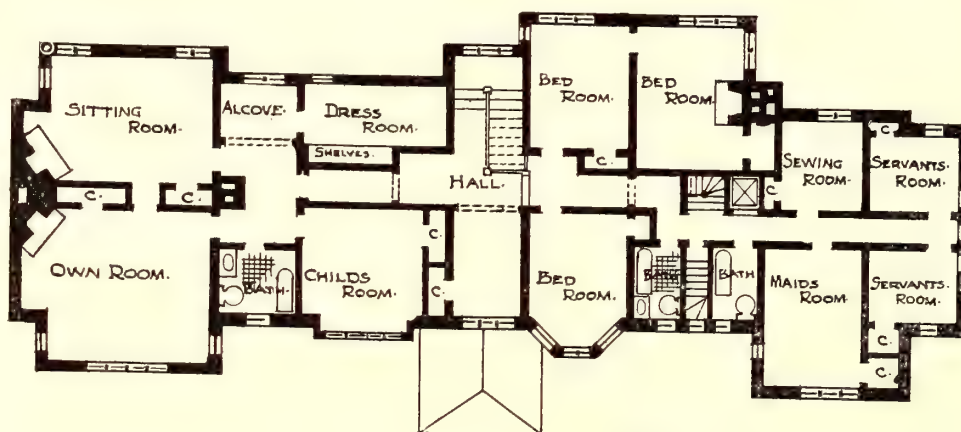


The Plan Shows Well Studied Arrangement of the House and Out-buildings



A Picturesque Arrangement of Roofs and Gables, with the Stable Beyond

house, which forms a part of the general scheme. A high brick wall with a hooded gateway to the left of the house separates the rear lawn from the front. The rear of the house faces the woods, and the intervening space between the house and the woods is laid out into a gar-



SECOND FLOOR PLAN.

den surrounded by an inclosed terrace. A brick walk, laid in herring-bone pattern, leads to the terrace wall and steps, and descending leads to the formal garden, with grassed walk, sundial and growing and flowering plants. This terrace has the advantage of certain straight



A Brick Wall Encloses the Terrace, with a Formal Garden Below



The Dining-room Is Wainscoted and Finished in Washed Gray



A Beamed Archway and Steps Connects the Stair Hall with the Living Hall



Exposed Brickwork Forms the Wainscoting of the Living Hall



The Library Has Walls of Mustard Yellow and Is Finished with Black Oak

lines, and the garden forms a certain axis relative to the house. The general effect of the combination is very happy, but, of course, the illustrations given herewith do not afford much of an idea of the way in which the surroundings of the house will ultimately look.

The design of the building itself presents an unusual combination of effective lines, excellent proportions, interesting openings, and telling projections. The plan is arranged on the elongated type, and the various rooms have been placed as they have been required by the owner, irrespective of the exterior, and while the wishes of the owner should be the first consideration of the architect, for a home is primarily a place in which to live, the exterior is sometimes sacrificed, but, in this particular case, the irregular lines have formed a nucleus by which the exterior walls rise in one graceful proportion.

The main part of the house and stable and the walk to the court and terrace are built of hard burned sand-finished red brick laid with Flemish brick in white mortar. The remainder of the buildings are covered with stucco in its natural gray color. The trimmings and all exposed woodwork are stained a soft brown. The whole building is surmounted with a red tile roof.

The plan of the house is peculiar because it makes no provision for a piazza, but something equally good is provided by an inclosed loggia at the rear, facing the terrace. The design of the interior is characterized by simplicity and good taste, and the owner of the house has loyally co-operated with

the architect in selecting furniture and hangings for the building.

The entrance-hall and living-hall are trimmed with sawn

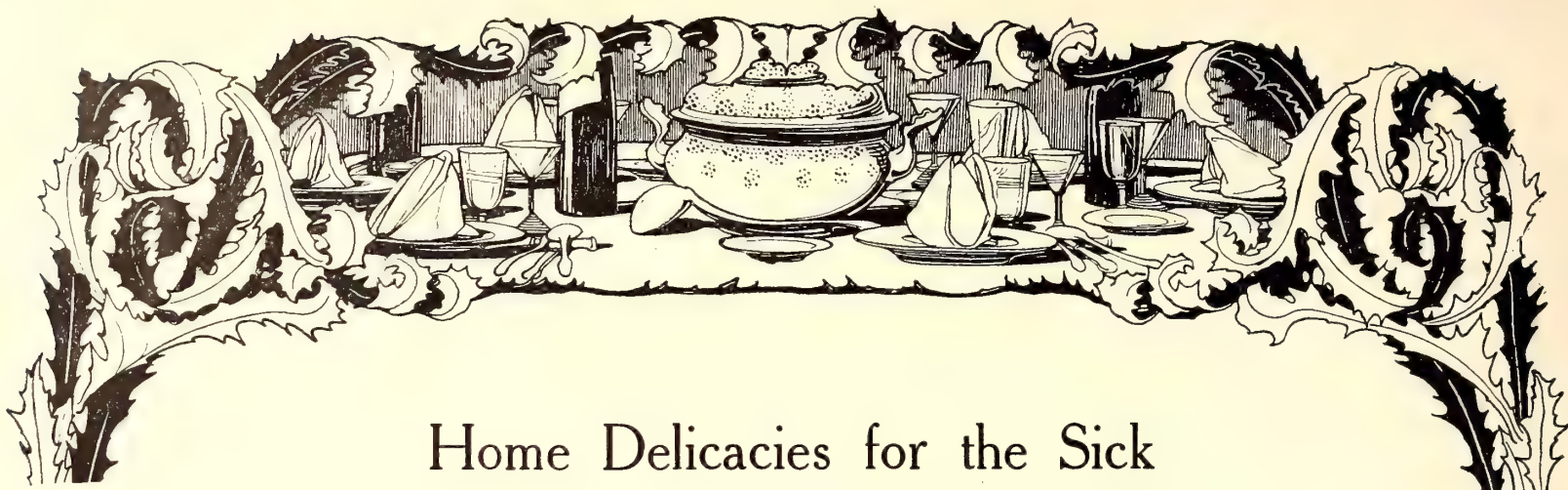
(Continued on page 475)



The Attractive Entrance



The Loggia Overlooking the Enclosed Terrace



Home Delicacies for the Sick

A Unique Enterprise

By Mabel Tuke Priestman



RIGHT in the heart of New York, at 39th Street and Fifth Avenue, an old-fashioned four-story brownstone house has been transformed by a new front of quaint Colonial design consisting of tiers of lattice windows reaching to the second story. The picturesque appearance of the house is further enhanced by the charming doorway, having lattice windows on the sides, with a roof covered with red tiles, which also extends above the lower group of casement windows. Geraniums or ferns are kept freshly growing in the attractive little ivy-covered tubs which are placed around the doorway.

On entering we find ourselves in a long, low hall furnished with antique furniture. On the right the door opens into an old-world Colonial kitchen with white-washed raftered ceiling, and in the distance may be seen an old hand-made brick fireplace with a Dutch oven, reminding one of an old New England farmhouse kitchen. The fireplace is a reproduction of one in the old Van Cortlandt Mansion.

This room is used

partly as an office for the Home Bureau, which owes its existence to a woman's passing illness, a French chef, and a too rich bowl of soup. At the crucial moment the daughter of the house came to the rescue, and provided temptingly served dainties which the doctor claimed had saved the life of the patient. The idea presented itself that this was a good field for a woman who needed to support herself, but in the whirl of a gay social life and an approaching marriage

the circumstance was forgotten. Later, without husband or fortune, the sickroom incident was brought to mind, and Mrs. Willard decided to take up the only thing in which she was skilled, the making of delicacies for the sick.

Concealing her identity and deciding to build up her business on good work alone rather than on social standing, she gained her reputation by supplying only the most carefully prepared and dainty foods. When the doctors proved how beneficial these were for their patients, they were glad to speak of her work. From her diet kitchen were sent out jellies, gruels, puddings, breads, flaxseed lemonades, oatmeal caudle, Pasteurized and peptonized



Outside the Home Bureau

milk and cream, until the demand has resulted in the present Home Bureau House, which now not only includes the diet kitchen but tea room and sterilizing room and suites of apartments for invalids.

In addition to the supplies of delicacies for the sick, trained nurses are provided at short notice for either short illnesses or for special operations. Surgical and nurses' outfits may be obtained and all appliances for special operations. Here, too, may be hired invalid chairs, outfits for babies, nursery appliances, cooking utensils and furniture. In fact, anything for the convenience of the doctor, nurse and patient.

Sandwiches and luncheons are put up for travelers, all of which may be had at the shortest possible notice. The pioneer work of supplying properly prepared food and sending it from the kitchen to the sickroom in any part of the city, day or night, resulted in saving so many lives that the Home Bureau came to be looked upon as a philanthropic institution rather than a business enterprise.

The founder, in the fall of 1890, started this campaign in two back rooms at 15 West 42d Street, but owing to its popularity it became necessary within two years to increase its

quarters to an entire floor. Two houses were rented for nurses and two main floors were added to the original establishment. The opening of the house at 52 West 39th Street marked another era in the history of this unique enterprise.

There is a restful charm about the house that pervades the whole atmosphere, and ever since the inception of the Home

Bureau the plan has been to emphasize the home feeling by the tasteful way in which the house is furnished and the quiet and orderly routine with which the work is carried out. There is no bustle or noise attached to the carrying out of this great work, but perfect quiet without confusion are the results of a well organized establishment. Not only is great attention paid to the preparation of the food, but the details of wrapping and shipping and delivery by uniformed boys all show the same attention to detail on the part of the founder.

The kitchen is well worth a visit, and although small is spotlessly clean. One wall is almost concealed by a line of refrigerators. Then there are two gas ranges with Alladin ovens, and closets with glass fronts, and a big deep case with glass sides in which the jars and bottles are kept ready for use. Neat assistants are kept busy putting up



A Stairway Leading to the Office on the Second Floor



An Agreeable Place for Afternoon Tea



The Colonial Kitchen and the Diet Kitchen Beyond

time to time to guests, when arranged for, and are served as were the old-fashioned dinners of Colonial days. The atmosphere of the room carries one back to the days of our ancestors.

Against the side wall facing the entrance door is a dresser, a duplicate of one in the Van Cortlandt Manor. Its shelves are filled with treasures of china, pewter and brass. An old coffee-pot from Dresden, and old willowware from Petersburg, Va., harmonize with the old pewter, many pieces of which are of great value.

The window-seat beneath the latticed windows is always gay and cheerful with flowers and potted plants. Tea is served at this end of the room from four to six every day.

Leaving this room we experience the transition from the old-fashioned homestead into the up-to-date rooms furnished with the latest ap-

pliances for carrying on the work of the house. Above the old kitchen are the offices and sterilizing room, where the bandages and appliances are stored and sterilized. The walls are hidden by cases with glass shelves upon which are placed the various outfits. Disinfectants, too, are stored in these rooms.

On the floor above are suites of rooms for invalids and a chicken jelly, sandwiches of stale bread and scarped beef, and putting up sterilized milk, which is poured into half-pint bottles made air tight with rubber stoppers. These are placed in pasteboard boxes divided into partitions, and are wrapped and sealed ready for delivery.

Leaving the diet kitchen we retrace our steps into the end of the low farmhouse kitchen with its peaceful atmosphere and old time furniture. The floor is covered with old-fashioned rag carpet, while the room is filled with antique pieces of furniture, picked up in Newport, Petersburg, Va., and Panama. Genuine old Windsor chairs and Dutch chairs all have their history. The old settle at the end of the room is over one hundred years old, and was found in a rickety building on top of a heap of rubbish. On one of the whitewashed walls is a mirror which once belonged to Washington Irving, and beside the mantel there is a lantern which hung in front of De Lessep's house in Panama. Many rare iron implements and cooking utensils may be seen around the fireplace, while relics of the war may be seen in the old musketry above the mantelshelf.

One of the features of the Home Bureau is the famous farmhouse dinners which are served in this kitchen from

pliances for carrying on the work of the house. Above the old kitchen are the offices and sterilizing room, where the bandages and appliances are stored and sterilized. The walls are hidden by cases with glass shelves upon which are placed the various outfits. Disinfectants, too, are stored in these rooms.

On the floor above are suites of rooms for invalids and a



Fireplace Copied from One in the Van Cortlandt Manor House

room for nurses' outfits, consisting of aprons, sleeves, separate waists and skirts, embroidered collars, cuffs and belts, even to collar buttons. All these articles are beautifully laid out in glass cases just as in the rooms below.

The apartments for invalids are all tastefully furnished. Carefully chosen papers of soft tones make a background for the beautiful old mahogany pieces with which the majority of these suites are furnished. There is such a feeling of rest and harmony on entering these rooms that one is not surprised to find that the sick make speedy recoveries in these peaceful rooms, where the comforts of home are found without the worry of keeping house. Winged chairs are covered with pretty chintzs, and all has an air of sweet freshness, accented by vases of freshly gathered flowers which are found in every room. Mrs. Willard's own apartments are reached by a pretty stairway leading up from the kitchen, and her rooms are furnished in yellow and black. Low window seats and a plentiful supply of latticed windows add a charm to her apartments, and although she has reserved the smallest rooms



An Old-time Dresser

for her own use, the choosing and placing of the furniture has made them seem larger than they really are. The staircase from the kitchen is surrounded by a baluster. The whole room bespeaks a woman of taste and refinement, and when we consider the work Mrs. Willard has accomplished and the good she has done it is not remarkable that the blessings of many have been liberally showered upon her by those whose anxieties concerning their loved ones she has alleviated in her cheerful, practical way.

Devoting her time and energy to the work, she has not only made a success of it from a humanitarian point of view, but is now ranked as one of the most successful of New York's business women.

No doubt the humanitarian aspects of this business constitute its most significant asset; but at least in the pages of an architectural magazine it may be permitted to emphasize, for a moment, the very interesting house the Home Bureau has made for itself. And it is not the least interesting because, in reality, it is simply an old-fashioned house remade over.

Residence of Maxwell Wyeth, Esq., at Rosemont, Pennsylvania

(Continued from page 471)

oak, treated with a stain of a dead gray tone. The walls are in harmony, with an old creamish gray treatment. The entrance-hall has a paneled wainscoting and ceiling beams. The staircase is designed in good taste, and its character blends well with the general scheme of the house. The living-hall is placed three steps below the level of the entrance hall, and is separated by a beamed arch supported on columns. An interesting feature of this living-hall is the brickwork, which is exposed to view, forming a wainscoting. The walls above and the woodwork is treated the same as the entrance-hall. The windows at both sides of the room are recessed, forming shelves for plants. At one side of the room a door opens onto the loggia, beyond which the terraces are reached. The large open fireplace, built of red brick laid in white mortar, has facings of similar brick, and a hearth laid in herring-bone fashion. The mantel-shelf, supported on carved brackets and surmounted by a Dutch hood, is quite the feature of the room.

A broad archway placed at one side of the fireplace permits one to pass into the living-room, which extends through the entire depth of the house. It is trimmed with oak finished black, harmonizing with the mustard-yellow with which the walls are treated. A broad archway separates the inglenook, which is provided with an open fireplace, with facings and hearth of red Welsh tile. The mantel-shelf and paneled overmantel are worked out in combination with the walls of the inglenook, which are also paneled. Windows are placed at each side of the fireplace, beneath which are paneled seats.

The dining-room, opening from the level of the entrance-hall, is finished in a washed gray, with wainscoting formed with battens placed at certain spaces apart, and the whole finished with a plate rack. A buffet is built in, at one side of which is a cabinet. A fireplace with buff brick facings, and mantel, completes the room. A door opens into the pantry and rear hall, while another door opens into the kitchen. Both the pantry, the kitchen and the servants' hall and their dependencies are fitted with all the best modern conveniences and according to the requirements of a well appointed house.

The second floor contains numerous rooms, all of which have painted walls and trim, and among them is the owner's suite, consisting of a large bedroom, painted in a soft gray, a sitting-room in blue, a child's bedroom in pink, a dressing-room and a bathroom.

There are two bedrooms, trunk rooms and ample storage space on the third floor. Extra bedrooms can be provided if necessary. The bathrooms have wainscotings and floors of Welsh tile, and each is furnished with porcelain fixtures and exposed nickelplated plumbing. The cellar contains the heating and cooling apparatus and fuel rooms.

The stable, which is planned as part of the scheme of the house, contains a large carriage room, harness room, and a stable containing two box stalls and four single stalls, all of which have ornamental iron trimmings. The floor of the stable is red tile, and that of the carriage room concrete. The second floor contains a man's room, hay loft, etc.

Residence of William F. May, Esq., Newton Center, Massachusetts

By Walter Welch

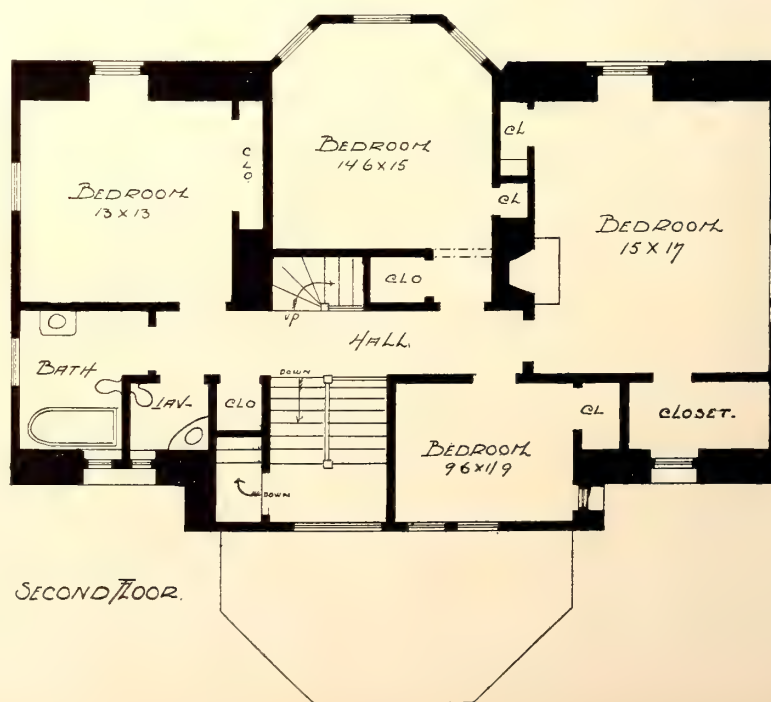
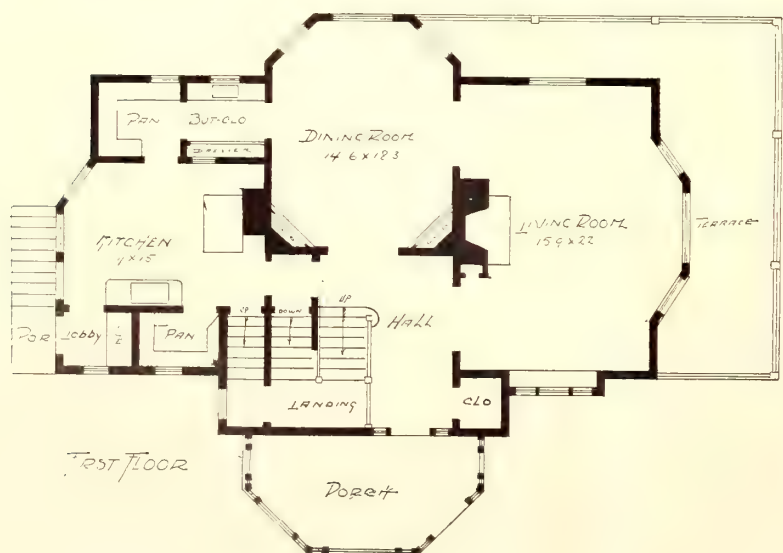


AN INTERESTING house is the one built for William F. May, Esq., at Newton Center, Mass. It is of the Dutch Colonial character with a gambrel roof overhanging the first story. The

entire building, which rests on a stone foundation, is covered with shingles and stained a silver gray color, while the trimmings are painted white. An attractive porch is placed at the front of the house, with latticed supports, on which



The House Is Dutch Colonial in Character, with a Gambrel Roof





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The Entrance Porch Has Latticed Supports



The Stairway in the Hall



The Living-room Has Mahogany Trim

are grown white clematis vines blooming in delightful profusion. A terrace, at the side of the house, extends around to the dining-room at the rear. The roof is covered with shingles and red brick chimneys pierce its ridge.

The hall, square in form, is at the side of the house. It has mahogany finish and blue wall covering. The treads and risers of the staircase are of oak, while the balustrade is of mahogany. The living-room, which is the most important room of the house, has mahogany finished trim. The walls have a mustard-colored wall covering. The hearth and facing to the fireplace are of brick, and the mantel and overmantel, of wood, are finished the same as the trim. The ceiling of the room is heavily beamed. French windows open onto the terrace.

Opening from the living-room, and also from the hall, is the dining-room, which is also treated with mahogany finish. There is a chair rail extending around the room below which the wall is covered with a dull red, while the wall space above has an autumnal decoration with a crimson foliage on a green background. In either corner of the room are built-in china closets, which answer for a buffet, as both of them have counter shelves with drawers and cupboards be-

low, and above are shelves inclosed with leaded glass doors.

The butler's pantry is fitted with sink, dresser and closet. A door opens into a store pantry, from which an entrance is made into the kitchen. This kitchen is finished with natural yellow pine and is fitted up complete. The lobby is large enough to admit an icebox.

Returning from the kitchen to the front hall, the staircase takes one to the second floor, which contains four bedrooms and a bathroom. The bedrooms are treated with ivory-white painted trim and distinctive wall decorations. The bathroom has white enamel trim and walls, and is furnished with porcelain fixtures and exposed nickelplated plumbing. The separate lavatory is a convenience for

this floor. The third floor contains the servants' room and trunk room. The house is heated by a furnace placed in the cellar, which also contains a laundry, fuel room and cold storage.

Messrs. Coolidge and Carlson, of Boston, Mass., were the architects of this house, which may very well serve as an illustration of the house of modest dimensions thoroughly well adapted to modern needs. It meets every requirement.



Built-in China Closets Are Striking Features of the Dining-room

The Winter Garden

By Eben E. Rexford



MOST persons who are owners of gardens seem to be under the impression that we must close the summer volume of Nature's book at the end of the season and not reopen it until the winter is over. In other words, we get very little pleasure out of the garden for six months of the year. This is completely wrong. There is no good reason why the home grounds should not be attractive the year round if we plant for winter as well as summer effect.

We can not have flowers in winter, but we can secure color-effects with but little trouble that will make good, to a considerable extent, the lack of flowers. Without these the winter landscape is cold, dreary, and monotonous to most persons. But there are always elements of wonderful beauty in it to those who have "the seeing eye." And there is ample material at hand with which to give it the touches of brightness that can make it almost as attractive as it is in June.

If the reader will carefully study the two illustrations which accompany this article, he will admit that the winter garden has many attractive features which the summer garden can not boast. These illustrations are summer and winter views of the same spot, taken in one of the Brooklyn parks. The summer view shows a wealth of foliage and bloom, and is one of Nature's beauty-spots that we never

tire of. But the winter view has in it a suggestion of breadth and distance that is most charming, brought out strongly by the naked branches of the trees against the sky, and the glimpses of delightful vistas farther on, which are hidden by the foliage of the summer view. Note how the evergreens stand out sharply against the background, and how clearly every shrub and branch is outlined by the snow. Whatever color there is in the landscape is heightened and emphasized by the contrast. Here are little touches full of exquisite beauty, none of which belong to the summer garden.

Most of us plant a few evergreens about our homes. Sometimes we are so fortunate as to locate them where they will prove effective. Oftener we put them where they can not do justice to their beauty. They do not belong near the house. They must be admired at a distance. You must be far enough away from them to be able to take in their charm of form at a glance, to observe the graceful sweep of their branches against the snow, and to fully take in the strength and richness of their color. None of these things can be done at close range. Looked at from a respectful distance, every good specimen of evergreen will afford a great deal of pleasure. But it might be made to afford more if we were to set about it in the right way. Why not make our evergreens serve as backgrounds against which to bring



In Winter, There Is a Charming Suggestion of Breadth and Distance



In Summer the Garden Shows a Wealth of Foliage and Bloom

out colors that will rival, to some extent, the flowers of summer?

Have you never taken a tramp along the edge of the woodland in winter, and come suddenly upon a group of scarlet-berried alders? What brightness they seemed to radiate upon the spot! They made so strong and vivid an impression upon the eye that you seemed to see them long after you had passed them. Why should we not transplant this bit of woodland glory to our garden, and heighten its effect by giving it an evergreen for a background? Its scarlet fire against the dark greenery of spruce or arborvitae would seem to make our winter garden fairly glow with warmth.

I have seen the red-branched willow planted near an evergreen, and the contrast of color brought out every branch so keenly that it seemed chiseled from coral. The effect was exquisite. Train *Celastrus scandens* where its pendant clusters of red and orange can show against evergreens, and you produce an effect that can be equaled by few flowers.

The barberry is an exceedingly useful shrub with which to work up vivid color-effects in winter. It shows attractively against other shrubs, is very charming when seen against snow, but is never quite so effective as when its richness of coloring is emphasized by contrast with the somber green of a spruce.

Our native cranberry (*Viburnum opulus*) is one of our very best berry-bearing shrubs. It holds its crimson fruit well in winter. Planted among evergreens it is wonderfully effective because of its tall and stately habit of growth.

The bayberry (*Myrica cerifera*) is another showy-fruited shrub. Its grayish-white berries are thickly studded along its brown branches, and are retained throughout the winter.

The snowberry (*Symphoricarpos racemosus*) has been cultivated for nearly a hundred years in our gardens, and probably stands at the head of the list as a white-berried shrub. If this is planted in front of evergreens the purity of its color is brought out charmingly. It is very effective when grown near scarlet-fruited shrubs, like the barberry or alder.

The value of the mountain ash for winter decoration is just beginning to be understood. If it retained its fruit throughout the winter, it would be our most valuable plant, but the birds claim it as their especial property, and it is generally fruitless by Christmas. But up to that time it is exceedingly attractive, especially if planted where it can have the benefit of strong contrast to bring out the rich color of its orange-red clusters.

The Ramanas rose (*R. lucida*) has showy clusters of crimson fruit which retains its beauty long after the holidays. This shrub is quite as attractive in winter as in summer.

There are many kinds of shrubs whose berries are blue, and black, or purple. While these are not so showy as those of scarlet or crimson or white, they are very beautiful, and can be made good use of in the winter garden.

It will be understood, from what I said at the beginning of this article, that I put high value on the decorative effect of leafless shrubs. Their branches, traced against a background of snow or sky, make an embroidery that has about it a charm summer can not equal. A bitter-sweet clambering over bush or tree, and displaying its many clusters of red and orange against a network of leafless branches, with the intense blue of a winter sky showing through them, makes a picture brilliant in the extreme. But the charm is not all in the color of the fruit, but in branch and twig as well.

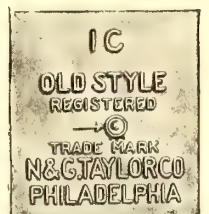
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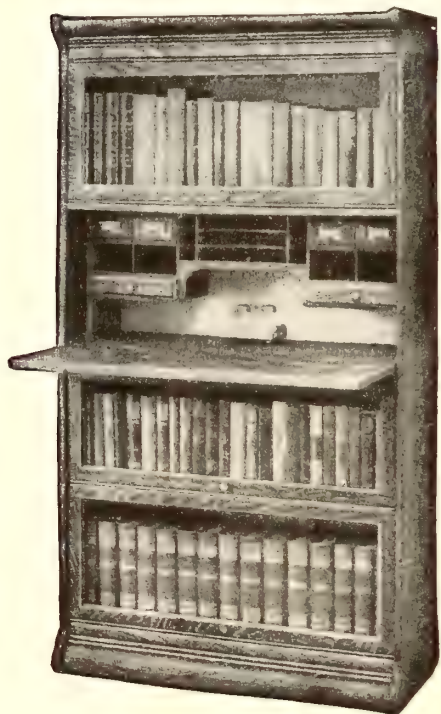


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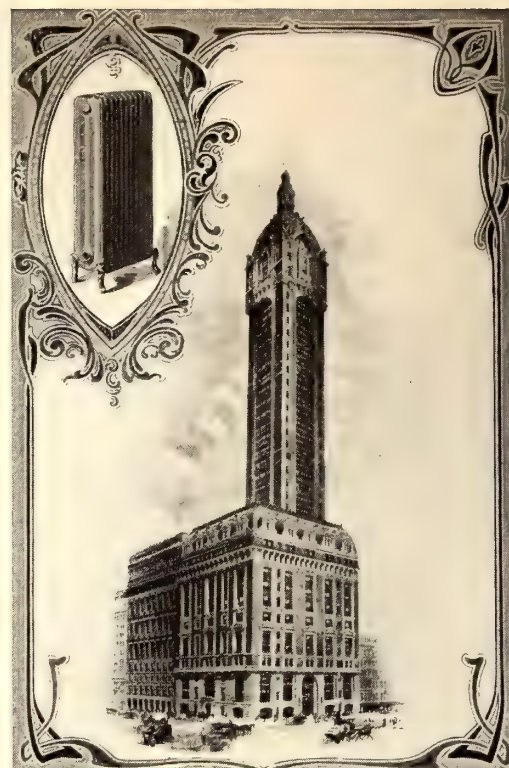
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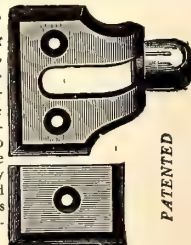
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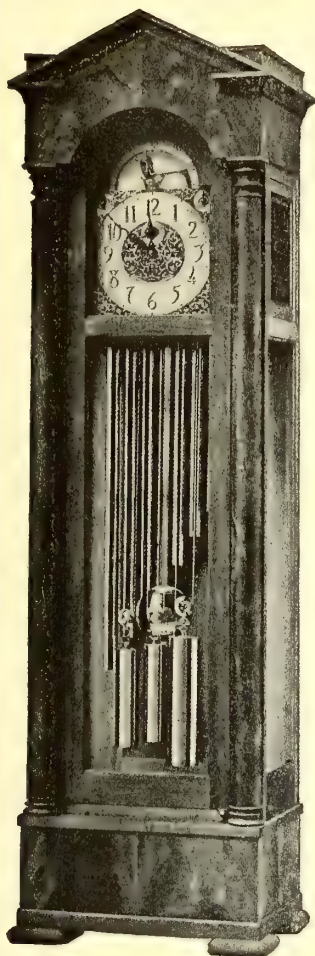


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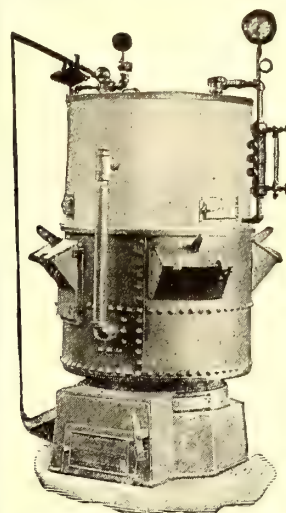
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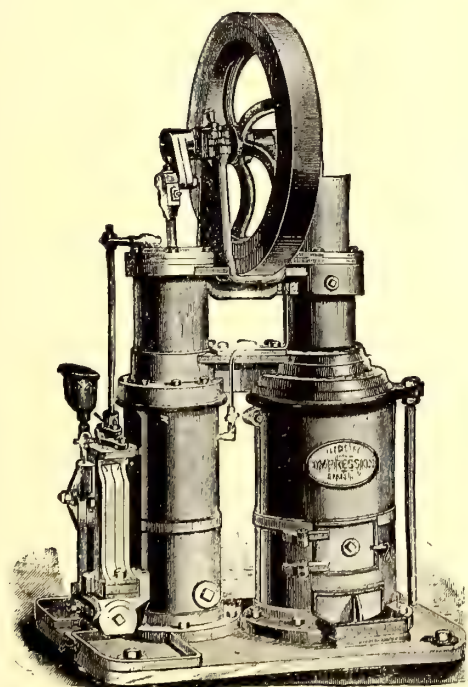


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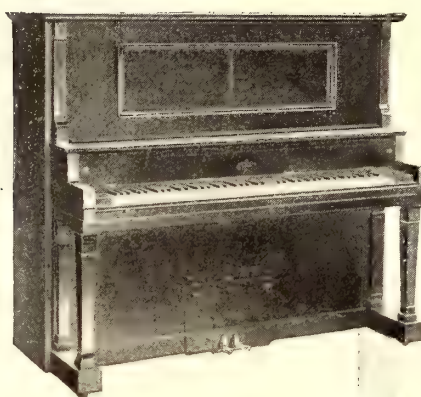
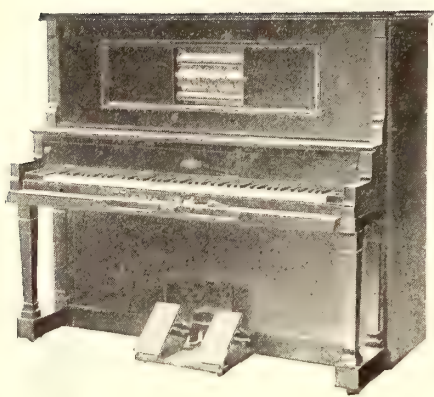
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THE ART AND CRAFT OF GARDEN MAKING.
By Thomas H. Mawson. Third edition, revised and enlarged. New York: Imported by Charles Scribner's Sons. Pp. 20+310. Price, \$10.00 net.

That three editions of so large and expensive a volume as this should have been called for is the highest possible demonstration of its merits and its utility. Its author has long enjoyed an extensive practise in laying out gardens in England, and this book represents the full expression of his wide and varied experience. Concerned, as it is, chiefly with the principles of the garden art and craft, with garden design in its most ornamental aspect, and abounding as it does, almost on every page, with suggestions of artistic and practical value, the fact that it is of English origin, written by an English designer, and intended primarily for English guidance and use, is of comparatively slight moment. The basic principles of this beautiful art are beyond the limits of any country or continent, and much of this book—the larger part of it, in fact—is as applicable to America as to England. It has, therefore, for American readers, a value of its own that is distinctly higher than many of the garden books which have come across the sea.

Mr. Mawson has little sympathy with the landscape designer who begins his work from the very beginning, and modifies and arranges his landscape to meet his preconceived ideas. He lays it down as a fundamental principle that the formal should not be exalted above the natural, and that, generally speaking, natural and existing contours are more pleasing than artificial ones, and should give a lead in all development and ground formation. Exceptions there are to such a rule, as there must be to all good rules in the betterment of nature, but the wisdom and soundness of such advice in garden design is beyond question.

The book covers, and covers very admirably, every aspect of garden design and treatment. An introductory chapter briefly describes the various styles of garden design in vogue in England and points out their varying adaptability to modern needs. The choice of a site and its treatment is illustrated with detailed surveys. A chapter on fences and gates is filled with brilliant suggestions. Terrace and flower gardens are discussed at length, both from the standpoint of design and from the plants that may be grown in them. Lawns and garden walks, summer houses, trellis work, garden furniture, water in fountains, lakes, streams and ponds, the building and use of conservatories, greenhouses, vineries and fruit houses, kitchen gardens and orchards, the formal arrangement of trees and shrubs in avenues and hedges, the question of planting for landscape effect, all these and many other practical and artistic questions are discussed at length, suggestions made, actual examples illustrated. Final chapters are descriptive of trees, shrubs, climbers, roses, hardy perennials, aquatic plants and ferns, and the book closes with a number of examples of garden design. There is an abundance of illustration, both from photographs and from drawings, with many sketches of details and numerous plans. It is a book that merits the warmest commendation, and is one the reading of which will aid many a garden designer

(Continued on page ix)

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Note: Striking examples of this style are made by Berkey & Gay Furniture Co., Grand Rapids, Mich., a few illustrations of which are used in this article. Their brochure, "Furniture of Character," contains descriptions not only of this style but also of other periods and classic styles. It will be mailed to you if you send 15 cents in U. S. stamps to Dept. M.



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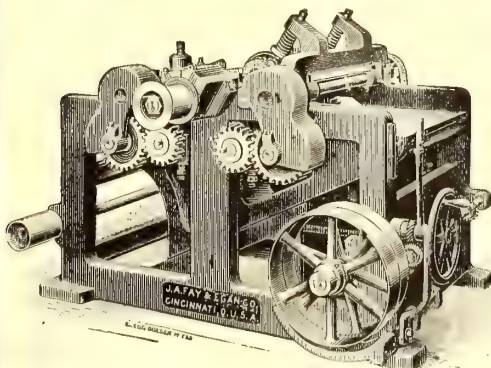
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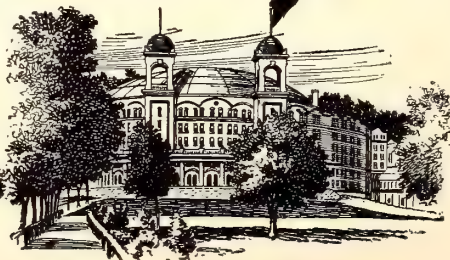
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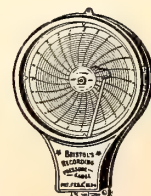
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and give a multitude of suggestions and ideas to the owner and proprietor. It is, in short, a discussion of the artistic side of gardens from the practical and real point of view, and is thus a book of unusual value.

HOUSES FOR TOWN OR COUNTRY. By William Herbert. New York: Duffield & Co. Pp. 240. Price, \$2.00 net.

That much of this book has already appeared in the pages of a technical architectural magazine by no means detracts from its value. It aims, as its title states, to discuss the various types of modern houses as shown by recent dwellings in cities and in the country. The two classes of structures are, in truth, widely different, but the discussion of their most modern types as shown by current American practice gives the author of this handsome book an opportunity for much sane criticism and illuminating discussion.

A rapid comment on American architecture of to-day is followed by a discussion of the typical town house. Then come chapters on the American country estate, the typical country house, the house for all the year, followed by separate chapters on the chief or ornamental rooms. The concluding chapters deal with the house in relation to out-of-doors and new uses of old forms. Written from the critical rather than from the descriptive point of view there is much of value and interest in these pages. The author's comment that in large estates or properties the layout of the land is adapted to the location and design of the house, instead of the proper and reverse process, is characteristic of the general tone of the book, and is an observation so very true that no one in America has yet thought of acting upon it, even when acres and acres, and practically miles of landscape are within the owner's control.

It is a charming book to read and is a volume that will give a great deal of pleasure to every one interested in houses, whether in the city or in the country. And it is a book of brilliant criticism that will help prospective builders and owners amazingly. There are numerous illustrations, adequately reproduced, and, for the most part, endowed with real interest. Many of the full-page illustrations, however, are printed with inscriptions to the inner margin, and are hence awkward and sometimes difficult to study.

DAFFODILS, NARCISSUS AND HOW TO GROW THEM. By A. M. Kirby. New York: Doubleday, Page & Co. Pp. 235. Price, \$1.10 net.

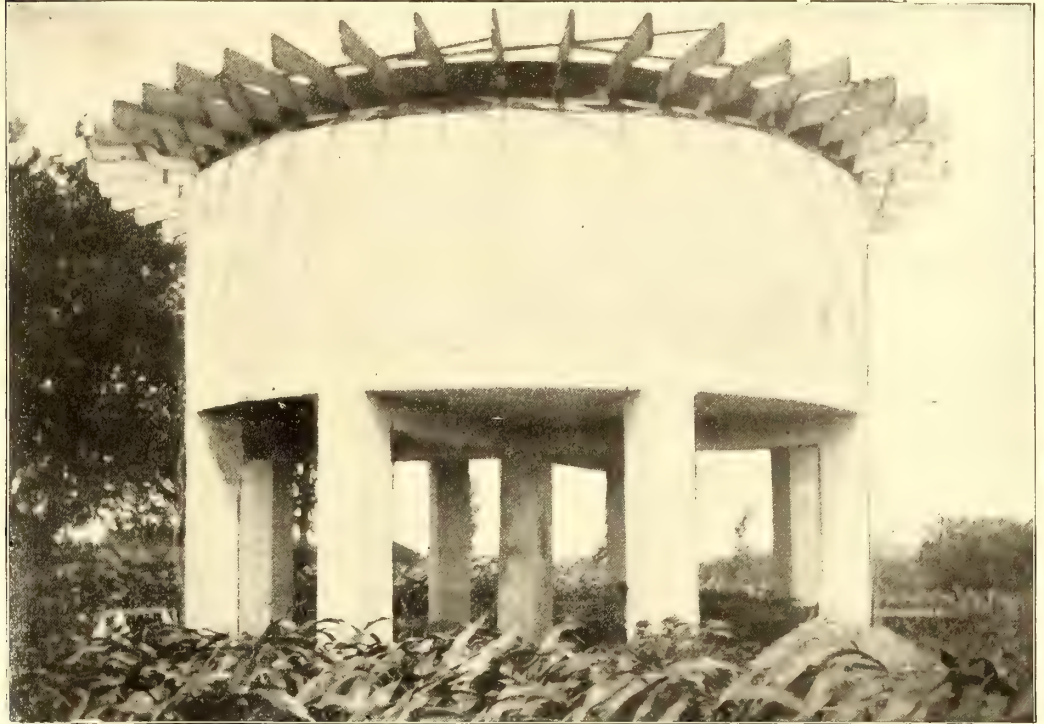
The publication of books on separate groups of flowers has a tendency to overweight the shelves of the bookish plant lover, but completeness of treatment is impossible by other method, and hence this little book on daffodils and narcissus will be welcomed by every lover of these beautiful plants. And who does not love them and enjoy their delicate beauty in early spring or, if one is more fortunate, and takes the necessary trouble, in autumn and winter?

The author of this book has undertaken to treat the subject in its entirety and does so with great detail. Perhaps every one will not care to read the volume through, but it is useful to know exactly where every needed item of information on these plants can be had, and the book is none the less valuable because it is chiefly concerned with cultural directions. They, indeed, make it valuable, for the photographic illustrations have been inserted as explanatory of the text rather than as embellishments. It is issued in convenient form and is supplied with an ample and very detailed index.

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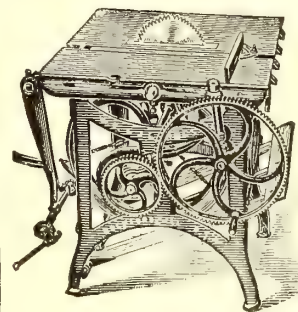
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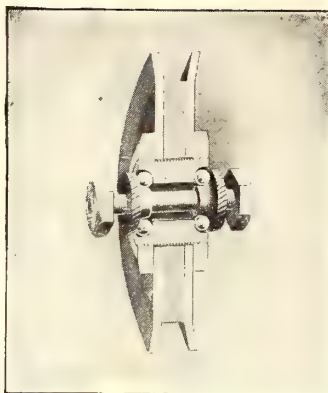
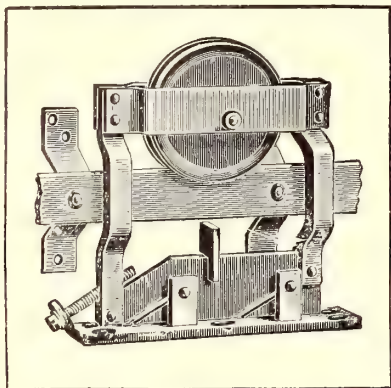
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GARDENING IN TOWN AND SUBURB. By Harry H. Thomas. New York: Longmans, Green & Co. Pp. 8+175. Price, \$1.00 net.

This is an unpretentious and useful volume dealing with gardens of a type not usually treated in garden books, that is, with small gardens such as are available in the somewhat restricted limits of town and suburbs as distinguished from the more ample gardens of the country. Its author is an accomplished English horticulturalist, but his book contains many suggestions of practical value that are as helpful and as useful in America as in England. It is a volume that will particularly appeal to the owner of the modest garden, to the man or woman who has but limited space and perhaps limited means for the cultivation of the gardening art. The introductory chapters treat of gardens in a general way, and are followed by detailed discussions of various kinds of flowering plants and groups of plants, trees and shrubs. There is a suggestive chapter on roof gardens and others on various types of greenhouses, followed by one on window gardening. The concluding chapter of useful hints is by no means the least useful in this very helpful little book.

HOW TO LAY OUT SUBURBAN HOME GROUND. By Herbert J. Kellaway. New York: John Wiley & Sons. Pp. 12+112. Price, \$2.50.

This is indeed a welcome addition to garden literature and fills a space wholly its own. The author has been fortunate in mapping out a distinctively individual plan for himself and filling in its outlines in a thoroughly successful and helpful manner. After all, the true test of books relating to gardens is their practical usefulness to the reader. It is a mistaken notion to look for definite help in books that necessarily must be general in their treatment, and it is the definite help that the average garden lover seeks rather than the statement of general principles whose practical application he can not always understand.

The general principles, however, are exactly the fundamental laws that underlie the making of all gardens and the treatment of all suburban and country places. Mr. Kellaway has undertaken to explain these elementary and essential matters in the briefest way and to show how their adoption succeeds and their avoidance fails. His plans and sketches, with commendable modesty, are offered not as designs to be carried out, but as examples of what can be done. Many a personal problem can, however, be bettered or solved by a study of his pages, and this is the true end sought in the writing of this book. The author very wisely refrains from giving extensive lists of shrubs, for, as he pertinently remarks, every locality has plants that are indigenous to it. Instead, he contents himself with the more useful method of directing the reader to means of securing in his own community the knowledge on this subject that every one requires. The book is adequately illustrated with photographs and plans, and will well repay careful reading and study.

LIVE GAME

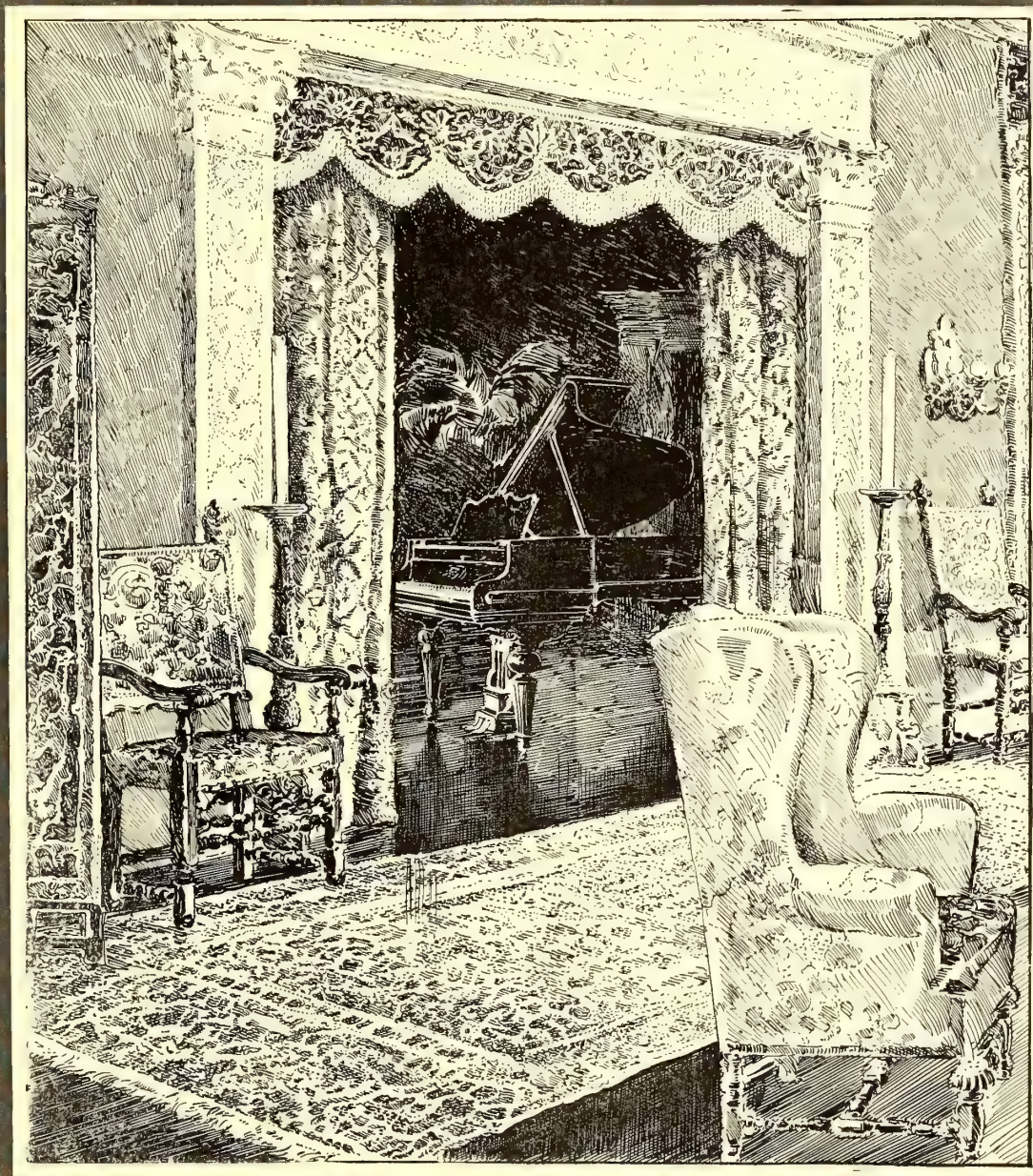
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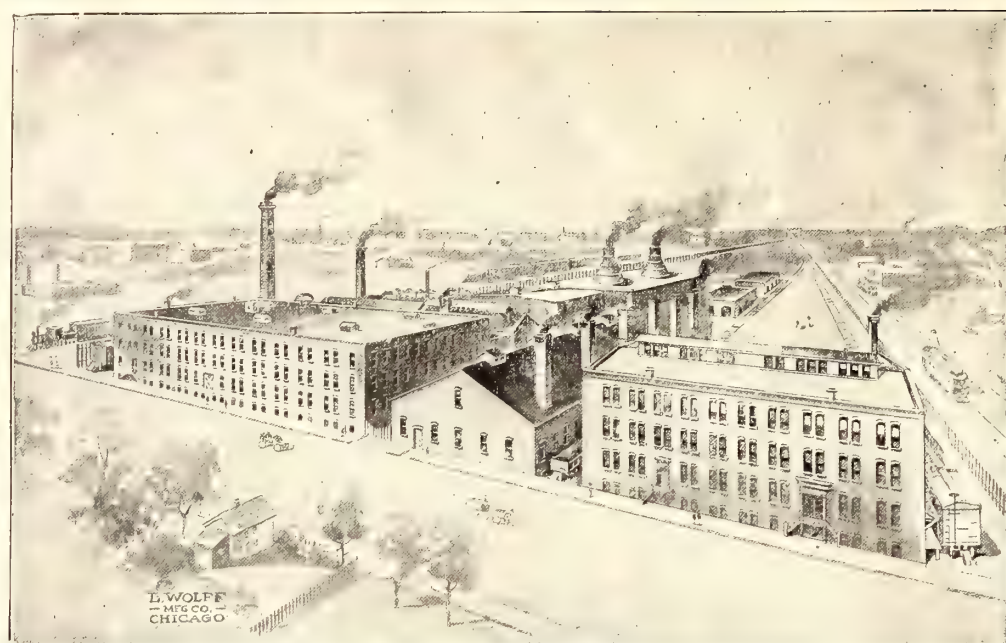


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GARDEN NOTES FOR DECEMBER

DO NOT neglect to take in the lawnmower, and all other tools used about the home grounds, before the closing in of winter. To leave these exposed to the weather the year round is to shorten their usefulness at least a third. Neglected tools are never in satisfactory working condition.

Last season I had an old hoe, which had outlived its usefulness in its original shape, cut into V-shape at the blacksmith shop. This I found extremely useful in working among seedling plants, as its point enabled me to pick weeds away from the seedlings growing near them without disturbing the latter in the least. This one can not do very well with the ordinary wide-bladed hoe. Another hoe was cut away on each back corner, leaving the blade as wide in front as it was originally, but only an inch in depth at its ends. This reduction of its surface prevented it from clogging when working in damp soil, and just as much work could be done with it as with a hoe of ordinary width.

If the cellar wall is high and exposed, banking may have to be resorted to to keep out frost. This ought to be done before very cold weather sets in. Frozen soil will not pack down compactly. Make the bank rather wide, and slope it at such an angle that boards can be laid over it, overlapping in shingle fashion, to carry off rain. A dry soil keeps out the cold much more effectively than a wet one. It also prevents a good deal of the dampness which is found in many cellars, banked in such a manner that the soil used becomes wet with fall rains, and remains in that condition throughout the winter. Of course freezing puts an end to the moisture's seeping through the wall, but it does not remove the disagreeable and unsanitary conditions which result from defective banking on the interior of the cellar.

Let me put in a plea for the above-ground cellar. I would never use a cellar under the dwelling for the storing of vegetables. Nothing more unsanitary can well be imagined. Many a case of typhoid and diphtheria has been directly traced to the germ-breeding atmosphere of the cellar, laden with the poisonous gases from decaying vegetable matter. An aboveground cellar is more convenient to every way. It is easier to clear. It costs but little more than the old-style cellar. It can be so arranged that light, heat and ventilation can be regulated to suit the requirements of the season and the weather much more effectively than in an underground cellar. The man who makes himself a new home makes a serious mistake by locating his cellar under the dwelling simply because others have done so so long that few think of putting it anywhere else. Study up on the advantages of a cellar aboveground if you contemplate building.

We are in the habit of thinking that the cellar requires but little attention until quite late in the season—along toward spring; in fact, such is not the case. More attention is needed now, and a little later, than at any other time. Many of the vegetables stored away will begin to decay almost from the time of storage. This is especially true of imperfect, injured or unripe ones. If these are removed promptly, those which remain are pretty sure to keep well, and much of the general unsanitariness which characterizes the average cellar during the earlier spring months can be avoided. Therefore let me urge at least a weekly inspection of the contents of your cellar, and a sorting out of all vegetables which show a tendency to decay and contaminate others with which they come in contact. Attention of this kind, given now,

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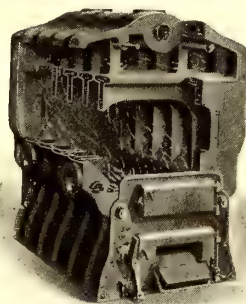
soot, and coal gases to vex the tidy housewife, as with stoves or hot-air furnaces—the needless tasks which make slavery for women.

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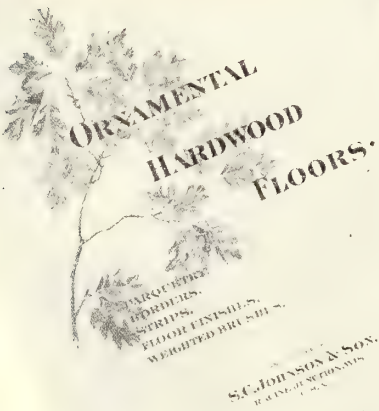
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is likely to result in the prevention of considerable loss by and by. It pays to give it, in more ways than one.

The window-garden is seldom very gay with flowers at this season. Many of the plants in it have not fully recovered from the effect of repotting and removal to the house, and others have not reached the flowering stage. Most, however, if they have been given proper care, will be growing well, and giving good promise of bloom a little later on. Those in active growth should be fed liberally to encourage vigorous development and to enable the plant to store up strength for the work before it. But keep on the safe side and don't fertilize too much. It is easy to overdo this matter. We are often led to do it by our desire to push our plants ahead, and our impatience of results leads to a rapid growth, from which there is likely to be a reaction later in the season, often a very disastrous one. When the owner of a window-garden learns to be satisfied with a healthy growth he is on the high road to success.

Be on the lookout for insects. Here is where the old saying, that "an ounce of prevention is worth a pound of cure," comes in pertinently. It is much easier to keep insects away than it is to get rid of them. I would advise every amateur flower grower to act on the offensive. Don't wait for the insects to put in appearance. They will be sure to come if you do nothing to head them off. Provide yourself with the means of exterminating them, and use it precisely as if they were really there. Use it once a week. If this is done you can prevent their taking possession of your plants. It may seem unnecessary to take precautions of this kind when the enemy is not in sight, but it is the easiest and the surest method of keeping your plants free from insects. Why not work a little every week to keep them away rather than be obliged to spend hours every other day in an effort to get rid of them?

Roses will suffer from aphid and red spider if not carefully attended to. Fight both these pests with the same weapons. Take a tub of water and put into it some of the Nikoteen extract of which mention has frequently been made. Dip the plants into this, as dipping is more effective in its operation than spraying, for the water gets to every portion of the plant. The tobacco extract kills the aphid; the water routs the spider.

Look to the potted bulbs at least once a week. If any seem to be getting rather dry, water moderately. Don't bring any to the window until they show signs of top growth.

Examine such plants as the Boston and Pierson fern frequently, if you have any reason to suspect the presence of the mealy-bug. You will generally find it down about the base of the fronds, where there is a dense growth. Remove all that you possibly can by making use of a sharp pointed stick. Then apply the emulsion made of soap and kerosene which I have frequently spoken of in this department. Do not saturate the crown of the plants with it, but put it where it will do the most good with a soft brush. By parting the stalks and the new fronds carefully, you will quite likely be able to discover the breeding-places of this pest.

Prune your plants as they develop. Never allow a branch to develop unless there is need of it. In pruning plants into symmetrical shape, save the clippings. Make cuttings of them from which to grow plants for your own use next season or to give away to other flower lovers who may not happen to have the varieties you grow.

Watch the amaryllises. If new leaves start, increase the water supply, and begin to apply fertilizers. Buds will generally appear about as soon as new leaves if the plants intend to flower.

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PLANNING THE GARDEN

By Ida D. Bennett

THE most important point in planning the garden is the location. Where as great a variety of plants as possible are to be grown it is necessary that the garden have an east and south exposure and that it be somewhat protected on the north and west, either by buildings or trees at a distance, as near-by trees are detrimental to a garden, the roots of the trees drawing too much moisture from the soil.

The soil of the garden is less important, as that can readily be replaced by better soil from a distance, and in replacing poor soil with good the requirements of the various plants to be grown can be consulted. If the soil is a warm loam with a fair proportion of sand it will grow the greater varieties of flowers successfully, and it will only be necessary to add clay to the rose beds and a little leaf mold from woods or compost heap to the beds for the pansies, heliotropes, and hibiscus, and muck from the marsh for the growing of water-lilies and a few other flowers. Marsh earth, however, is very acceptable to all of our ornamental bedding plants, especially the canna, ricinus and salvia, and a few dollars invested in a few wagon loads of this piled in an out-of-the-way place to decay is a very good investment for the garden.

The relation of the garden to the house is important, as much of the pleasure of gardening is lost if one must be too much in the public eye or be in any way inconvenienced in going to and from one's work. A shelter for tools, at least, should be within easy reach of the garden, so that as little time as possible need be spent in collecting what is necessary. But while the garden should be easily accessible from the house it should have its privacy guarded in some way, either by an encircling wall or hedge, though the latter may be but a low one of flowering plants.

If the garden is located where the land falls away from it in any direction, especially toward the south or east, the matter of drainage will not be apt to give any serious trouble, but where the land is flat and underlaid with clay it will be necessary to underdrain with porous tile, and it will be best to do this before any beds are marked out or paths established.

There is a prevalent opinion that the shape of the bed is an important consideration. This is true only in a superficial sense. The paths are really the more important point, having the relation to a garden that the streets have to a city. Given good broad paths to get about in and the work becomes a pleasure, but winding paths, full of impractical or impossible angles, make for irritation and ineffectual work. There are heavy loads of earth and fertilizers to be wheeled along the garden paths, and loads of weeds and other refuse to be carted out. Racks of dead leaves are to be brought in for winter protection, all calling for good roads and easy curves. The quality of the roads depends both on their width and smoothness, so that the material of which they are composed is also important. Where expense need not be too closely considered it will be well to lay concrete or cement walks, and in doing so to extend the edges of the walks into a curb about the beds. But where cement walks with curbs are laid provision for drainage should not be neglected, as water standing on cement walks after every rain is very annoying. Drainage plates set in the walks every few feet will obviate this.

The garden will grow, and provision must be made for it by so arranging the beds that they may be extended when the need arises without disturbing the portion already planted.

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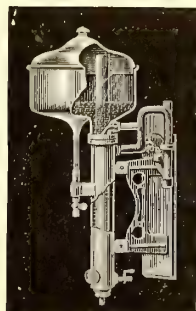
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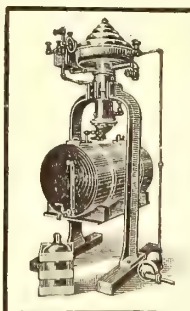
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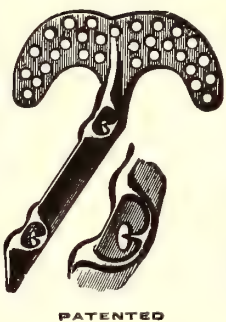
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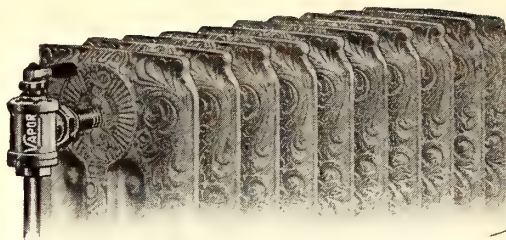
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A garden complete in all its parts may be satisfactory for a year or two, but well cared for plants soon outgrow their allotted ground and must be divided or cut back or have more room provided in some way. Then, too, if a plant is really desirable and worth cultivating, others of the same species will likely prove attractive and desirable, and we will wish to possess as many varieties as possible, for one of the delights of gardening is to possess more or less complete collections of the different species grown, or at least the best of the species. This is impossible in a garden with fixed limits.

There are several ways of laying out a garden so that it may be conveniently added to. One is a succession of beds, either straight, oval, or round, or a combination of all three, which may be duplicated at will, thus extending the garden to any length or width. Another and favorite plan of my own is to let the beds radiate from some common center, as the spokes of a wheel or the ribs of a fan. The paths form the spokes or ribs, and the intervening spaces the beds. This gives the greatest amount of space available for the growing of flowers, and admits of the easiest and most practical culture.

If the garden is large—say a quarter of an acre in extent and nearly or quite square, and the beds radiate from one side, starting from the center of the side where a large open place of thirty or more feet in diameter may be provided with garden seats and table, a summer house, or may be the point where the pergola debouches into the garden—then the beds as they recede will widen rapidly until at the further boundary of the garden they will be of considerable extent and may be subdivided by auxiliary paths or planted with shrubbery. This convenience for planting shrubbery is important, for it is often difficult to combine hardy flowering shrubs with flowers, and it is sometimes necessary to do so or abandon the growing of shrubs. Especially is this the case with young shrubs, which require garden culture and will be benefited by growing in the garden for a few years before being transplanted into permanent places along drives, boundaries or in a regular shrubbery.

In the radiating beds all classes of plants may be grown without in any way conflicting with each other. Thus bedding plants and annuals may be grown at the narrow part of the beds abutting on the central green; hardy perennials further on, keeping the line of demarcation clearly indicated; and in the rear the shrubbery and such ornamental conifers as may be grown in masses.

Where the garden is large, effective planting may consist of carrying the line of shrub-

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bery a part of the distance up the center of the beds from the rear, thus giving a background for the hardy perennials, which will be massed each side of the shrubbery. In planting the bed they may be massed as in hardy borders or a single plant devoted to each bed. This, however, limits the variety of plants, or calls for a considerable number of beds, so that it will be more practical to devote a few beds to one or more kinds of flowers—as lilies and paeonies, roses and beds of iris and foxgloves, and mass the perennials in the remaining beds. It is always practical and desirable to border the beds with rows of early spring bulbs and edging plants.

As what to plant in the garden resolves itself into a question of room and ability to care for the garden after it is planted, and there is no more common mistake of the amateur than to undertake more than they can accomplish, it is usually more satisfactory to have a number of the best varieties of certain plants than to have a great number of kinds of plants, and but one or two of a kind. A dozen good varieties is preferable to a score of kinds, several of which might be inferior.

Naturally one will wish to plant liberally of roses, especially of the teas and hybrid teas, and the radiating beds are especially practical for the growing of roses, as the June roses may be planted in the rear, the China, Bengal and perpetuals in the middle, and the front and sides of the beds devoted to the use of the teas. Paeonies, too, should be grown to a considerable extent, selecting the best types of the several colors and not overlooking the single flowers, which are so artistic. The tree paeonies may be grown through the center of the beds and massed at the rear with excellent effect. The paeony bed is one of the most satisfactory places for establishing the garden lilies, and the more common sorts may be massed in large clumps in the rear, leaving the more conspicuous parts of the beds for the finer classes, especially those of low growth, such as the various speciosum varieties, the coral lily, *L. tenuifolium*, and the like. The auratum, which grow quite tall, and are conspicuous anywhere, the giganteums, washing-toniums, brownii, and other tall-growing varieties, may be planted through the center and at the rear.

The various iris are a prime essential of the hardy garden, and the collection of fine varieties offers a most interesting series. Carnations are indispensable to the summer garden, and the florists' carnations do exceedingly well planted out in the open ground and well supplied with water. Heliotrope is another plant which well repays summer cultivation, and the large ruffled petunias should find a place in every garden. These two last are especially suited for massing at the beginnings of the beds, being low, of constant blooming habit and furnishing an effective foreground for the taller plants beyond. Pansies may be massed in beds or used to edge the beds, planting several rows in line.

Dahlias are so rank and tall that it will be necessary to plant them through the center of the beds or in the rear. This is true also of the cannas, ricinus, and other ornamental plants, and the needs of such plants as require a background to bring out their good points should be considered and the presence of these tall plants taken advantage of. Aquilegias are much improved by a background of green; so, too, is the scarlet lychnis, the tritoma, the cardinal flower and a few other flowers. Nearly all plants gain by a bright ribbon of color next the ground, and for purposes of edging the various phlox Drummondii will be found indispensable. Dwarf ageratum is also a most desirable flower, but the seed must be purchased with discretion and only the



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very dwarf variety selected. Double English daisies are charming, and sweet alyssum is too old a favorite to need commendation; it has the fault of seeding badly, but where cement walks are used is not troublesome, as the plants drooping over the edge of the beds shed little seed on the soil.

Garden seats are necessary if one is to really enjoy the garden, and should be placed wherever there is room and a fine view of the beds are to be obtained. This will be at the beginning of the beds and at the ends of the long paths usually, especially at the end of paths bordered by plants in long rows, as iris or foxgloves, as these plants look best when viewed lengthwise of the rows rather than across. If the garden possesses more than one level, that is, if the rear portion, for instance, is lower than the upper part, the view from the lower point up will usually be the best in the garden, and this should be taken advantage of in locating seats.

THE PREPARATION OF CURRANT JUICE AND MARMALADE

By Dr. W. Donselt

THE most important things in the preparation of currant juice and marmalade, as well as in all other high-class fruit products of the kind, are that the fruit should be fresh and the sugar pure. The fruit is best dead ripe, as in that state it has the finest flavor, the strongest aroma and the best color. It should also be gathered in dry weather; the juice is then most concentrated and will keep its flavor best. The currants should be freed from the stems, as these contain considerable tannic acid, which will always give a bitter and disagreeable taste to the marmalade; and this can be most conveniently done when they are picked by means of a wooden comb.

Refined, unblued sugar is the purest, and has the greatest sweetening power, therefore it is the best for the purpose. About ten per cent. of starch syrup (glucose) is frequently added; this is said to preserve the aroma and prevent the crystallization of the sugar after the evaporation.

For preparing currant juice, fine ripe currants are to be freed from the stems and crushed with rollers, or a pestle in a clay vessel. The pulp thus obtained is set away to ferment, in a covered earthen vessel, at a temperature of about 68 degrees Fahrenheit. The fermentation is allowed to go on for a week or ten days, during which time the mass should be frequently stirred. It may be considered finished when a little of the juice, filtered off, will mix with half as much alcohol without changing color and without any jelly-like separation. The fruit mass is then to be set in a cool, dark room, covered, for several days, or until it has nearly cleared; then filtered through filter paper and boiled, 7 parts of juice to 13 parts of sugar. The syrup will be red, with an agreeable currant aroma.

In preparing this or other fruit juices, cherries, raspberries, etc., iron or tin vessels should be avoided, as they are liable to affect the color and flavor. Copper or brass are best, but care must be taken to pour out the juice while hot into glass or earthen vessels, as some copper would be dissolved in cooling, and discolor the syrup, also make it poisonous and unfit for use. To make sure that the syrup will keep well, it is absolutely necessary for the fermentation to be carried on at the prescribed temperature, and to be entirely finished. In preparing large quantities of juice, the best

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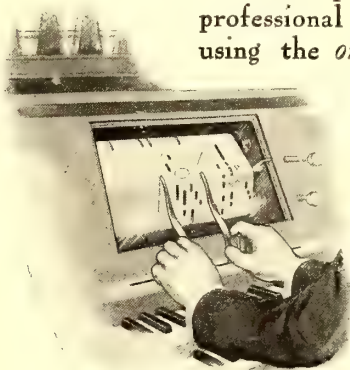
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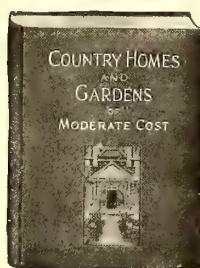
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vessel for the fermentation is a closed cask, in the bung hole of which is inserted an air-tight glass tube, not too small, and twice bent, with the shorter arm dipping into a vessel of water. When no more bubbles of gas rise in the water, the fermentation is finished. The juice is now allowed to settle and is then filtered. The settlings may be placed upon the filter first, and the thin juice poured on until it runs through clear, or this may be poured off from the settlings, which is usually the quicker and better way. If the juice is not yet clear, shake it up with the residue of the filtering, or add skim-milk, which will do good service. In boiling the syrup, the sugar is to be added before it is very hot, after this is dissolved increase the heat, and boil without stirring until the foaming, which will be violent at first, has ceased. Take off the scum, and pour the syrup carefully through a piece of flannel into bottles, cork these well, and set away in a cool dark place.

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To prepare black currant juice, boil two quarts of the currants in one quart of water until all have burst. Do not boil too hard; if the fruit become a mash, the juice will not be clear. When the currants are soft, put through a sieve and filter. For each pound of juice take three quarters of a pound of sugar, dissolve this in the juice before heating, and then boil, with skimming, about half an hour. Put the syrup into the bottles as hot as possible, and let it cool in them. Thus a skin, or film, will be formed, which will help to preserve the syrup. When cool, cork the bottles, and keep in a cool place. Black currant juice is sometimes used as a remedy for a cough.

In making marmalade, the currants are to be pressed through a sieve. For each pound of the pulp take thirteen ounces of the best crushed sugar, and boil to a jelly over a not too hot fire. When it will "jelly" on the spoon, remove from the fire and put into jars hot. Do not boil it too hard, as the color and flavor will be injured thereby. Let the jars stand about forty-eight hours, then cover the surface with strips of parchment paper dipped in rum or in alcoholic salicylic solution, and close the jars with stiff paper or a bladder.

Marmalade can also be made from black currants, reckoning one hundred pounds of currants to fifty pounds of sugar, and cooking as described above. In Germany, especially in the Rhine countries, both red and black currant marmalade are eaten with bread, also used for tarts and puddings.—Pure Products.

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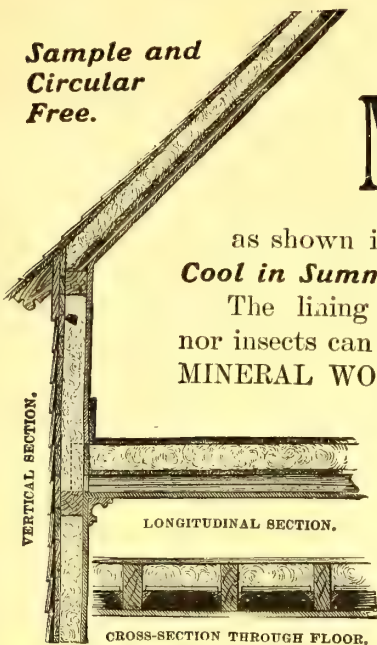
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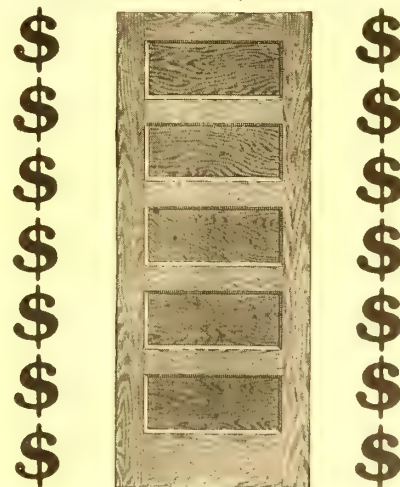
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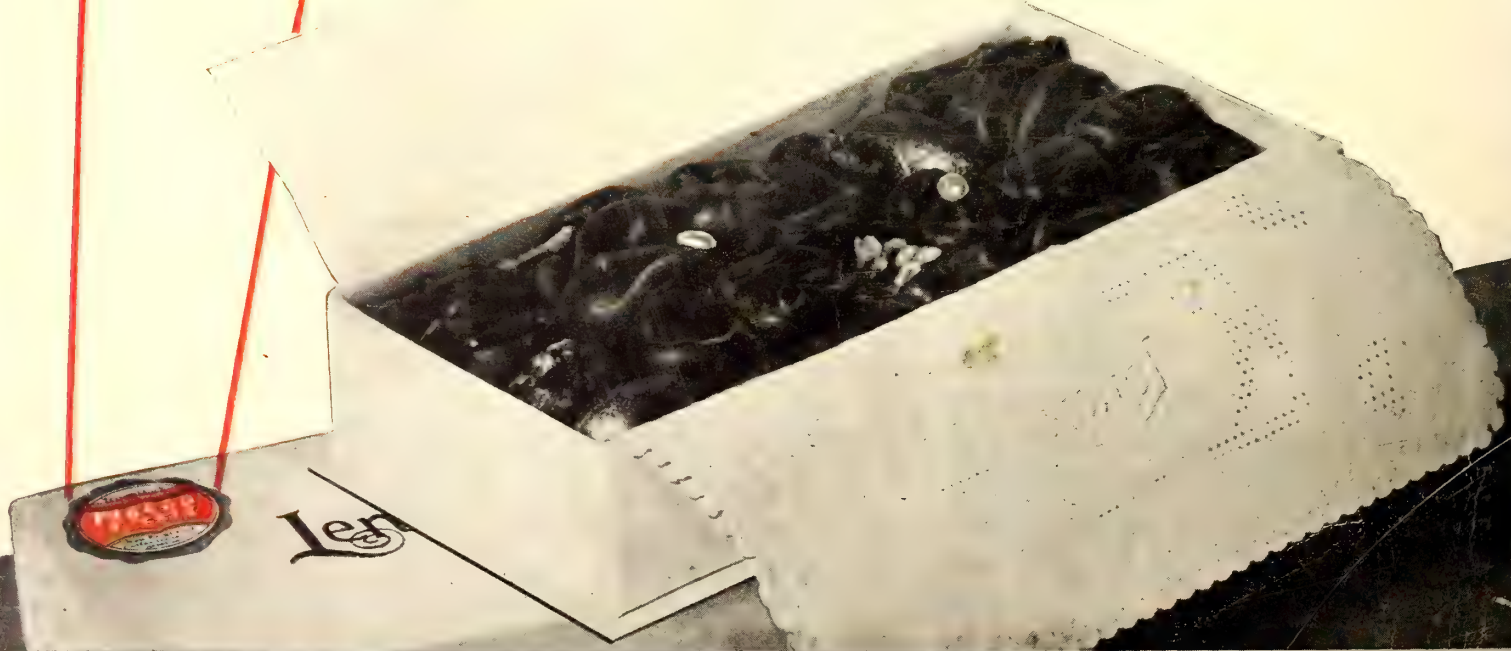
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